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# ANNUAL PUBLIC HEALTH REPORT

OF THE

PROVINCE OF ORISSA

FOR THE YEAR

1936

AND THE

# ANNUAL VACCINATION REPORT

FOR THE YEAR

1936-37

BY

Lt.-Col. G. VERGHESE, I.M.S.,

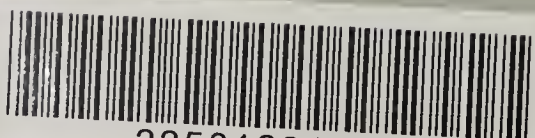
*Director of Health and Prisons Services, Orissa.*



PRESS OFFICER, GOVERNMENT PRESS,  
ORISSA, CUTTACK.

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(Maximum limit of narrative portion of Report—30 pages.)

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# PROVINCE OF ORISSA

Scale 1 Inch = 64 Miles




## REFERENCES

- |               |             |
|---------------|-------------|
| 1 NARSINGHPUR | 4 ATHGARH   |
| 2 BARAMBA     | 5 KHANDPARA |
| 3 TIGIRIA     | 6 RANPUR    |

## REFERENCES

Boundary:— Province . . . . .
District . . . . .
do State . . . . .
do Subdivision . . . . .

Drawn & Zincographed in the Bihar Survey Office, Gulzarbagh, Patna.



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# Annual Public Health Report of the Province of Orissa for the year 1936.

## CHAPTER I.

### Meteorology, prices of grains, etc.

**Rainfall.**—The following short account of the meteorological conditions in the province of Orissa during the year 1936 is taken from the report of the Director-General of Observatories :—

The total rainfall in January was in excess by 0·32" in the province. Skies were more clouded than usual and scattered thunder-showers occurred occasionally during the month. Both the maximum and the minimum temperatures were in excess by 1·4" and 3·8", respectively, and the humidity was slightly below normal.

The total rainfall in February was in excess by 0·89". A portion of the western disturbances which moved eastward induced local rain in the province on the 17th of the month. The maximum temperature was remarkably low, but the minimum temperature was in slight excess and the humidity above normal.

The total rainfall in March was in slight defect over the whole province. Both the maximum and the minimum temperatures were in excess by 1·6" and 1·2", respectively. The humidity also was in defect.

The total rainfall in April was in large defect by 1·06" over the province. Both the maximum and the minimum temperatures remained above normal and humidity continued to be in defect.

The total rainfall in May was in large excess by 6·60". The depression that formed near latitude 15° N., longitude 86° E., on the 22nd May, was responsible for the extension of the monsoon into the province. Thunder-storms, sometimes attended with hail, were active on most of the days of the month. The maximum temperature was below the normal and humidity recorded slightly above normal.

A storm and a depression formed in the North Bay of Bengal on 11th June helped to strengthen the monsoon in Orissa. Locally heavy rain occurred in the province between 9th and 14th and, as a result, serious breaches occurred in the Bengal-Nagpur Railway lines passing through Orissa. The total rainfall in this month was in excess by 11·03". Both the maximum and the minimum temperatures were below normal while humidity was above normal throughout the province.

A depression formed off the Orissa Ganjam coast on the 20th July crossed Orissa coast near Furi three days later. In association with this depression heavy rain fell along the Orissa Ganjam coast. The total rainfall during July was in excess by 1·22". The maximum and minimum temperatures were roughly normal while the humidity remained above normal.

Two depressions formed in the Bay of Bengal off the Orissa coast during August and caused widespread heavy rain in Orissa. The maximum and the minimum temperatures and humidity were roughly normal.

The total rainfall in September was in defect by 1·34" in the province. The maximum and minimum temperatures recorded slightly below normal and humidity was roughly normal everywhere in the province.

Early in October a deep depression formed in the northern and central Bay of Bengal which developed into a cyclonic storm. Moving northward, the storm passed inland across the Orissa coast near Chandbali on the 4th. The storm was responsible for heavy rain in the province and extensive damage was



reported to have occurred over a wide area in the province between Bhadrak subdivision in the district of Balasore and Khurda subdivision in the district of Puri. A large number of trees and houses were affected by this cyclone. Nearly 300 thatched houses collapsed in Cuttack town alone. Railway services as well as telegraphic and telephonic communications in Orissa were seriously dislocated. The total rainfall was in excess by 4.42". The maximum and the minimum temperatures recorded below normal and humidity above normal.

The rainfall in November was in defect by 1.63" all over the province. The maximum and the minimum temperatures and the humidity recorded above normal throughout the province. The total rainfall in December was only 0.15" as against 0.32" of normal rainfall in this month. The maximum and the minimum temperatures and the humidity recorded above normal.

The total rainfall in the province during the year under report was 77.36" against the average normal rainfall of 56.80".

**2. Price of common grain.**—The average price of common rice during the year varied from 8 seers in the district of Ganjam to 25 seers in Angul, but in the majority of districts it remained over 12 seers.

The following statement shows the average monthly price of common rice at the headquarters of the district of the whole province for the year 1936:—

*Statement showing the monthly average price of common rice (cheapest) at the headquarters markets of the districts of the province of Orissa for the year 1936.*

District.	January.	February.	March.	April.	May.	June.	July.	August.	September.	October.	November.	December.
	Sr. Ch.	Sr. Ch.	Sr. Ch.	Sr. Ch.	Sr. Ch.	Sr. Ch.	Sr. Ch.	Sr. Ch.	Sr. Ch.	Sr. Ch.	Sr. Ch.	Sr. Ch.
Cuttack	15 12	15 12	15 12	15 12	15 12	13 12½	13 2	13 2	13 2	13 2	14 7	15 12
Balasore	13 0	13 12	15 0	14 8	13 2	12 0	12 6	12 4	12 8	14 3	14 12	16 12
Puri	15 12	15 12	17 1	16 6½	17 11½	13 12½	12 7½	13 12½	13 12½	13 12½	16 1	16 1
Sambalpur	16 0	16 0	16 7	15 12	14 3	13 0	13 4	14 1	16 14	15 12	20 4	20 4
Angul	17 9	17 9	17 9	17 1	16 9	15 8	15 5	15 0	15 12	16 2	25 1½	24 2
Khondmals	13 8	13 8	12 12	12 0	12 0	12 0	10 8	11 11	12 3	13 2	18 14	20 10
Ganjam	8 8	8 8	8 8	8 13	8 8	8 8	9 6	9 10	9 10	9 10	9 10	9 10
Koraput	14 6	14 6	19 2	11 0	11 0	12 3	12 4	11 13	12 0	14 4½	14 6	14 5½

## CHAPTER II.

### Vital Statistics.

The population of this province in the British territories as calculated at the census taken in February 1931 was 7,990,297. However, the vital statistics recorded relate only to a population of 6,953,760. This figure is exclusive of the population of a large portion of the agencies of Ganjam and Koraput districts, where there is no proper system of collection of vital statistics.

**2.** The total number of births in this province during 1936 was 254,697 (130,821 males and 123,876 females). The provincial birth-rate for this year was 36.6 per mille.

3. The statement below gives figures regarding birth-rates in other provinces :—

Province.					Birth-rate per mille of population, 1936.
Orissa	...	...	...	...	36.63
Bengal	...	...	...	...	33.53
Bihar	...	...	...	...	35.34
United Provinces	...	...	...	...	38.99
Central Provinces	...	...	...	...	42.50
Punjab	...	...	...	...	46.85
Bombay	...	...	...	...	41.40
Madras	...	...	...	...	37.76
Burma	...	...	...	...	34.27
Assam	...	...	...	...	30.24
North-West Frontier	...	...	...	...	32.64
Sind	...	...	...	...	20.52

4. **Birth Registration.**—The highest birth-rate 41.7 was recorded in the Angul district and lowest birth-rate 23.3 and 33.2 in the Agency districts and the district of Balasore, respectively. The municipalities of Berhampur and Parlakimedi registered the highest birth-rates, namely, 45.6 and 37.8, respectively, whilst the municipalities of Cuttack and Balasore registered the lowest rates, viz., 12.8 and 20.5, respectively.

The rural and urban areas of the province recorded 249,066 and 5,631 births, respectively, and the birth-rates for these areas being 37.0 and 26.0, respectively. The higher birth-rate in the rural areas, as compared to the urban birth-rate, appears to be due to the population of the rural areas (*i*) being more than that in the urban areas, (*ii*) being poor illiterate agriculturists, among whom early marriage is encouraged and children are regarded as an asset to the villagers; (*iii*) any manner of birth control being unknown to them; and (*iv*) the number of married females being greater in villages from where many married men have to earn their living in towns. The mean birth-rate for the province cannot be worked out as the number of births of the last five years of the whole area, including the added areas, is not available.

5. **Deaths.**—The total number of deaths registered in the province during the year under review was 193,588 (95,347 males and 98,241 females). Out of these, the rural areas recorded 188,978 deaths and the urban areas 4,610. The provincial death-rate for 1936 was 27.8.

The statement below shows comparatively death-rates in other provinces :—

Province.					Death-rate per mille of population, 1936.
Orissa	...	...	...	...	27.84
Bengal	...	...	...	...	24.50
Bihar	...	...	...	...	21.68
United Provinces	...	...	...	...	22.61
Central Provinces	...	...	...	...	34.89
Punjab	...	...	...	...	23.97
Bombay	...	...	...	...	27.73
Madras	...	...	...	...	23.30
Burma	...	...	...	...	21.84
Assam	...	...	...	...	19.63
North-West Frontier	...	...	...	...	17.92
Sind	...	...	...	...	12.49



**6. Death Registration.**—The highest death-rates were recorded in the districts of Khondinals, Balasore and Cuttack as 34.1, 32.4 and 30.4, respectively, whilst the lowest were recorded in Agency districts and in Ganjam plains as 15.9 and 22.8, respectively. Amongst the towns in the province the highest death-rates were recorded in Puri and Kendrapara as 37.7 and 35.5 respectively; and lowest in Cuttack (9.0) and Jajpur (11.6). With regard to Puri town, the comparatively higher death-rate is due to the influx of a large number of pilgrims during all parts of the year and from many parts of India that visit the town on holy pilgrimage to the famous Jagannath Temple, some of them in an advanced state of ill-health, contending to have their last days on earth after having had a *darsan* of the temple.

The average death-rate of the rural areas was 28.1 and of the urban areas 21.3. Thus the rural death-rate was higher than that of the urban area by 6.8.

The rate of increase in the population, *i.e.*, the excess of the birth-rate over the death-rate in the province was 8.8.

**7. Mortality according to age, class and sex.**—50,651 deaths were recorded amongst infants under one year of age during 1936. The mortality rate for infants under one year was 205.4 for males and 191.9 for females with the total infant mortality rate of 198.8 per mille of births registered in the province. The high mortality rate in this province as in other parts of India is to a very great extent due to ignorance, poverty, lack of well-conceived maternity and child welfare efforts and inadequate supply of wholesome drinking water in the rural areas, especially in the low-lying and water-logged parts of the province, causing heavy epidemics of cholera and other bowel diseases in recurring waves year after year. Malaria also is an important contributory factor in mounting up the mortality amongst the people.

There were as usual considerable differences in the death-rates among the different classes of community. The death-rate was highest amongst Hindus (28.3) and lowest among the Christians (13.0). The death-rate among the Muhammadans was 25.1.

**8. Verification of the registration of vital occurrences.**—Registration of vital occurrences is compulsory in all the eight municipalities of the province. Registration of vital occurrences is not compulsory in the rural areas of the province, except in the rural areas of Ganjam district (plains portions only), and that is only in such villages which has a population of 2,000 and over.

There are two systems of reporting occurrences of vital statistics in this province. The reporting agency in the rural areas and in most of the municipalities of the ex-Bihar, ex-Central Provinces area or North Orissa, is the police, whereas the system in the ex-Madras areas (South Orissa) is through the village headman. No vital statistics are, however, collected from the Agency areas of Koraput and Ganjam Agency, except a few villages of the former and one taluk of the latter, as there is no proper system of registration of births and deaths. The population of these areas from where no vital statistics are collected has been excluded from the total population in calculating vital statistical figures. These systems although prevailing in most parts of India yet remain defective, especially with regard to the correct classification of the causes of deaths. The diagnosis of the diseases lies with the village chaukidars or village headman, as the case may be, who are mostly uneducated, and as they have to depend entirely on what they are told by the members of the family, it is obvious that a classification based on such diagnosis cannot approach accuracy.

The accuracy of 5,269 vital occurrences were investigated in the compulsory areas and verified by the Health Officers, health staff and officers of the Vaccination Department; 143 omissions were detected, 40 prosecutions were instituted and 18 convictions were obtained.



The rural areas where the registration of births and deaths are not compulsory, 73,037 vital occurrences were verified by the health and vaccination staff. Verification of vital statistics in these areas is very difficult, especially in the districts which do not maintain a complete health organisation under district health officers.

The registration of births and deaths is still unsatisfactory and substantial improvement has not yet been achieved, as the village headmen or chaukidars who are in charge of registration fail to realise the importance of this branch of public health work. Further, they are uneducated and lethargic to make correct enquiries and record all occurrences. In areas where compulsory notifications are in force the penal provisions of the Act were seldom enforced. It is a mistaken impression among the Registrars that all responsibility regarding the collection of statistics of births and deaths ceases with the introduction of the Act for compulsory registration. Most of the people, whether due to ignorance of the operation of the compulsory Act or to the fact that no cognizance is generally taken for failure to notify, fail to report the occurrences of births and deaths to the Registrar.

**9. Publication of vital statistics.**—The weekly publication of vital occurrences for all the municipal towns in the province with a population of over 20,000 continued as usual throughout the year.

Weekly epidemic reports of all the districts showing attacks and deaths from cholera, small-pox, plague and influenza were published regularly in the *Orissa Gazette* and also in some of the important newspapers.

By the publication of these statistics it is hoped to keep the public informed of the actual state of health of the large towns and of the prevalence of epidemic diseases in the districts. Publicity of this kind also demonstrates the utility of vital statistics and helps to create an interest in the minds of the people for general public health.

### CHAPTERS III and IV.

#### State of public health in the province and history of the chief diseases—Epidemiology.

**Incidence of the chief diseases.**—The statement below shows the ratios per 1,000 of population under the chief heads of mortality in 1936:—

		Rural.	Urban.	Combined.
Cholera	...	1.2	0.8	1.1
Small-pox	...	0.6	0.2	0.5
Fevers	...	14.3	7.0	14.0
Dysentery and diarrhoea	...	2.3	2.8	2.3
Respiratory diseases	...	0.7	1.7	0.7
Injuries	...	0.4	0.4	0.4
All other causes	...	8.6	8.4	8.6
		—	—	—
Total	...	28.1	21.3	27.8
		—	—	—

Highest death-rate, 14.0, was recorded from fevers, but in the absence of any arrangements to report correct diagnosis it is not possible to say what percentage of deaths under fevers is definitely due to malaria.

The urban death-rates from cholera, small-pox and fevers were lower than those of the rural areas. This is ascribed to better standard of sanitation in the municipal towns, but the mortality rates from dysentery and diarrhoea, fever and respiratory diseases still remain higher in the urban areas. The high mortality rate from dysentery and diarrhoea in the



urban areas of this province is mainly due to the bad state of water-supply. The comparatively high rate of mortality from fever in urban areas may be ascribed to malaria.

2. **Cholera statistics.**—The death-rate from cholera was 1·1 per mille during 1936. The districts of Cuttack, Balasore and Sambalpur recorded the highest death-rates, viz., 1·9, 1·9 and 1·2, respectively. Amongst the towns, Sambalpur (5·3) and Kendrapara (2·1) recorded highest death-rates.

3. **Cholera in the province.**—The province being notorious for cholera this disease remained more or less prevalent throughout the year. The total number of deaths from this disease in 1936 was 7,977. The districts of Cuttack, Balasore and Sambalpur reported the highest number of deaths from cholera, namely, 4,238, 1,835 and 1,273, respectively. Cholera was prevalent almost throughout the year in these districts. The epidemic of cholera was in maximum intensity in the above districts from April to August. But the district of Cuttack was again severely affected during the months of November and December. The rest of the districts recorded sporadic cases of cholera.

4. **Cholera preventive measures.**—With the growth of public health organisations in districts, there is being created in those districts which employ health officers, an efficient and well-trained staff to deal with outbreaks of cholera as soon as they occur. Four district boards of this province have maintained qualified health officers with a suitable subordinate staff. There were, therefore, fewer demands for extra epidemic doctors to combat cholera from these districts. But when the outbreak became serious and widespread and the district staff were unable to cope with the situation, temporary epidemic doctors had to be detailed from the Public Health Department. Five Government epidemic doctors were detailed on epidemic duty during the year in the cholera-affected areas of the districts.

Sufficient stock of disinfectants, such as bleaching powder, permanganate of potash and also kaolin for use in the treatment of cholera cases, are kept in reserve by the district boards.

Anti-cholera inoculation has now become a popular preventive measure and sufficient supply of the anti-cholera vaccine was made free of cost by Government to the local bodies of the province whenever required. About two lakhs doses of cholera vaccine were issued for giving anti-cholera inoculations in the province. Many people now offer themselves of their own accord for inoculation at the approach of the cholera season. Cholera-phage manufactured at the Bihar Bacteriophage Laboratory, Patna, was also very extensively used during the year in most of the districts where cholera was prevalent. During the Rathjatra festival at Puri cholera-phage was mixed with the drinking water-supply and gave very satisfactory results.

The noteworthy reduction in the incidence of cholera in Puri town, practically to a negligible extent during recent years in the season of the Rathjatra festival when a very large concourse of pilgrims from all parts of India gather in the town, is a striking testimony of the value of protected water-supply which Puri town has happily got since comparatively recently and of what anti-cholera inoculation and other sustained and organised public health measures can accomplish.

5. **Small-pox.**—The total number of deaths from small-pox during 1936 was 3,789 and the mortality rate for the year was 0·5.

The lower death-rate from small-pox in 1936 is attributed to the immunity conferred by extensive vaccinations and revaccinations carried out during the previous years.

As usual, the rural areas suffered more than the urban areas and the highest death-rate was registered in the districts of Cuttack (0·9) and in Khondmals (1·3), whilst the district of Puri and Ganjam plains reported lowest death-rates (0·2). Amongst the towns, Balasore and Sambalpur recorded highest death-rates, namely, 0·8 and 0·7, respectively.



Primary vaccination is compulsory under the Bengal Vaccination Act in all the municipal towns of North Orissa and also in the rural areas of Puri district. Both vaccinations and revaccinations are compulsory in the plains areas of the Ganjam district and in the municipalities of Berhampur and Parlakimedi, under the Madras Local Boards Act and the Madras District Municipalities Act. In district which has a health organisation, the control of vaccination has been transferred to the local bodies and the health officers of those districts have been appointed as superintendents of vaccination. The Civil Surgeons still exercise the powers of the superintendents of vaccination in places where the local bodies have no health officers.

The vaccine lymph manufactured at the Vaccine Depot, Namkum, was purchased by the Government of Orissa and supplied throughout the province free of cost; 531,721 vaccination operations were performed in the province during the year under report. Out of these, 207,932 cases were primary vaccinations and 323,789 cases were those of revaccination. Although it is a known fact that vaccination definitely checks the incidence of small-pox, the rate of mortality from the disease tends to show sharp rises at times. This is due to the fact that a large number of children escape even primary vaccination and thus remain unprotected. Besides, the immunity conferred by primary vaccination passes off within six to seven years. It is, therefore, quite clear that so long as vaccination and also revaccination are not made compulsory throughout the province the incidence of small-pox would continue often at times in an alarming degree.

**6. Plague.**—No case of plague was reported in this province during the year under report. Particular care was, however, taken to prevent this infection getting through Gopalpur port into this province through immigrants returning from plague-infected ports, such as Rangoon.

**7. Dysentery and Diarrhoea.**—There were 16,283 deaths from this group of diseases during 1936 and the mortality rate was 2·3 per mille of population. The rate of deaths from this disease was 2·3 and 2·8 in the rural and urban areas, respectively. The districts of Cuttack and Puri recorded highest rates, namely, 3·9 and 3·4, respectively. Amongst the towns Puri (6·3) and Kendrapara (3·2) reported the highest rates.

The highest death-rate in the districts of this province from these diseases is probably due to climatic conditions and to a large extent is associated with the bad state of water-supply and defective sanitation.

It may be noted that Puri town has recorded the highest death-rate which, as already noted elsewhere, is due to the fact that the place being a seaside town and a sacred place of pilgrimage, people suffering from various kinds of diseases resort to the place for change of climate and also to pass their last days of life to attain salvation according to their religious belief and hence a large number of deaths occur in the town every year.

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## CHAPTER V.

### Fairs and Festivals.

As Orissa is famous for fairs and festivities, a great many *melas* are held every year in the different parts of this province. Some of these *melas* are only of local interest and are attended by the people of the districts in which they are held and those of the adjoining districts. The Snan and the Rathjatra festivals, which are held in Puri, are the most important festivals in the province as well as in India. Puri, being the sacred place of Hindu pilgrimage, attracts a large number of pilgrims from all over India. In 1936, the Snan and the Rathjatra festivals were held at Puri on 5th June and 21st June, respectively. About 75,000 pilgrims, besides the normal population of Puri, numbering 37,558, assembled to participate in the celebration of the Car festival. Nine Sub-Assistant Surgeons were deputed by Government for making sanitary and preventive arrangements at Puri during the



festivals. Five of these were employed on sanitary duties and four were put on special duty at the cholera hospital. Besides these, one Sub-Assistant Surgeon was appointed by the Puri Municipality for the occasion. The town as usual was divided into six sanitary wards and each ward was put under the charge of a Medical Officer. About ten thousand pilgrims stayed in *dharamsalas* and lodging-houses. Some stayed with their friends and the majority, who came for a few hours, stayed on the road-sides, as the weather was fair and the day sunny. All the wells, numbering 2,059, were regularly treated with choleraphage during the *mela* period. The wells at the railway stations of Sakhigopal, Delang, Khurda Road and Bhubaneswar were regularly treated with choleraphage under the supervision of the railway doctors on special duty during the period. The wells on the road-sides between Puri and Sardaipur near Bhubaneswar were also regularly treated with choleraphage by the Health Officer of the District Board, Puri. Intensive anti-cholera inoculations were carried out among the pilgrims and the residents of Puri as a measure against possible outbreaks of cholera during the festival; 16,183 anti-cholera inoculations were performed in Puri town alone as against 3,738 in the preceding year. Both anti-cholera inoculations and the administration of choleraphage were resorted to for the prevention of cholera in the festival area. It is gratifying to note that although the Puri town and the district of Puri reported sporadic cases of cholera during the months of June and July, the incidence of cholera in the *mela* did not at all assume high proportions. The total number of cholera cases reported during the *mela* period was only 24 against 44 of the preceding year. All these cases were removed to the hospital and were treated with choleraphage, although some of them required intravenous saline injection. There were only three deaths among the patients against six in the previous year. Piped water-supply from the Puri Water Works was available for 24 hours for 30 days throughout the town from the 450 street water hydrants; the supply being continuous, quite a large number of pilgrims and residents were able to get pure water for drinking and cooking purposes. The whole water-supply was thoroughly chlorinated before the festival. Suspicious sources of water-supply were heavily chlorinated, wherever possible, so as to make the water unsuitable for any purpose, thereby compelling people to have recourse only to protected supplies.

Special arrangements were made as usual for prompt reporting of the cases of infectious diseases occurring in *dharamsalas*, lodging-houses and private houses by the house-owners and medical practitioners. Ambulance cars were also posted at different places for the quick removal of cholera patients to the Cholera Hospital.

Numerous small fairs are usually held in all the districts of the province in which necessary sanitary arrangements are made by the local bodies under the supervision of the local health staff.

It is worthy of note that close and healthy co-operation between the officers of the Health Department and those of the Revenue and Police Departments were maintained in all matters of common interest to the people during these fairs and festivals.

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## CHAPTER VI.

### Urban Sanitation.

The province has eight municipalities. Of these, Cuttack, Puri and Berhampur have each a qualified health officer paid for by Government. The former two are provincial officers with D.P.H. qualification and the latter is a subordinate provincial officer with L.P.H. diploma, and the rest have no health officers and the sanitation of those municipalities is looked after by a Sanitary Inspector or a Sanitary Overseer—not altogether a satisfactory arrangement.



The need for the appointment of at least second class health officers in the bigger municipalities of Parlakimedi, Sambalpur and Balasore is immediately felt for improving the sanitation of those municipalities. These officers, if appointed, could in addition to their own sanitary duties supervise and perform the duties of a Superintendent of Vaccination. Sanitary Inspectors that are employed by these municipalities, by reason of their limited training and outlook, are not considered qualified enough to undertake the work of health officers, nor are they capable enough to carry out effective preventive measures during epidemics.

Vaccination is compulsory in the municipalities of Cuttack, Puri, Balasore, Sambalpur, Kendrapara and Jajpur under the Bengal Vaccination Act. Both vaccination and re-vaccination are compulsory in the municipalities of Berhampur and Parlakimedi under the Madras District Municipalities Act.

The statement below shows the receipts and the expenditure for sanitary purposes during the year 1935-36 :—

**2. Expenditure on sanitation in municipal towns—**

Number of municipalities.	Total receipts, including opening balance.	Heads of expenditure.	1935-36.	Percentage of expenditure to total receipts.
	1935-36.			1935-36.
1	2	3	4	5
	Rs.		Rs.	
8	9,55,178	Conservancy ...	1,86,824	19.6
		Drainage ...	22,660	2.4
		Water-supply ...	22,869	2.4
		Vaccination ...	2,858	0.3
		Epidemics ...	10,354	1.1
		Markets and fairs ...	17,279	1.8
		Other sanitary charges ...	303	0.03
		Public health staff ...	16,376	1.7
		Total ...	2,79,523	29.3

**3. Chief sanitary works in municipal towns.**—The details of expenditure under this head are dealt with in the report of the Superintending Engineer Public Health Circle, Bihar and Orissa.

## CHAPTER VII.

### Rural Sanitation.

The public health organisation of all the newly-constituted six districts in the province remained unchanged. The several Acts and rules relating to public health were in force in each district as they were before the amalgamation of the districts into a separate province, viz., the Madras Acts and rules were in force in ex-Madras areas, the Central Provinces Acts and rules in the ex-Central Provinces area and Bihar and Orissa Acts and rules in the old Orissa Division.

The public health arrangements in Koraput and Ganjam Agency, Angul and Khondmals were managed by a staff maintained by Government.

Out of the six districts, Cuttack (excluding Angul), Puri, Balasore and Ganjam (excluding Khondmals and the Agency areas) have each a fully-qualified health officer and a proper health organisation scheme. The last named health officer belongs to the Provincial Public Health Service and the former three officers are district board servants. In the Ganjam Agency, including Khondmals, and in Koraput district, the Civil Surgeon, Ganjam, and the Agency Surgeon, Koraput, were, respectively, directly in charge of the public health administration. In Sambalpur, the Civil Surgeon is the head of the public health administration. He has a Government vaccination inspecting staff, consisting of one Inspector and three Sub-Inspectors, who attend to vaccination work as well as to other epidemics.

Vaccination is compulsory in the rural areas of Puri district under the Bengal Vaccination Act and both vaccination and re-vaccination are compulsory in the plains portion of Ganjam district under the Madras Local Boards Act. Vaccination in rural areas of North Orissa is performed on a licensed system, while in South Orissa this is done through paid vaccinators. It is absolutely necessary that vaccination should be made compulsory throughout the province and efforts are being made in this direction.

Introduction of health organisation with a qualified health officer is considered to be an urgent necessity for every district board. Without a health officer in the district efficient supervision of the work of the subordinate health staff and effective control of epidemics can hardly be possible.

**2. Expenditure on sanitation by district boards.**—The following statement shows the receipts and expenditure of district boards under the principal headings of sanitation:—

Number of district boards.	Total receipts, including opening balance.	Heads of expenditure.	1935-36.	Percentage of expenditure to total receipts.
	1935-36.			1935-36.
1	2	3	4	5
	Rs.		Rs.	
6	36,31,992	Conservancy ...	14,454	0.4
		Drainage ...	990	0.03
		Water-supply ...	43,872	1.2
		Vaccination ...	37,113	1.0
		Epidemics ...	4,373	0.1
		Markets and fairs ...	1,562	0.04
		Other sanitary charges ...	...	...
		Public health staff ...	1,17,154	3.2
		Total ...	2,19,518	6.0



## CHAPTER VIII.

**Malaria.**

"Fevers" appear to be the chief cause of mortality in the province. 97,672 deaths from fever or 50 per cent. of the total mortality from all causes were reported to have occurred during the year. A number of diseases in which the rise of temperature is a marked symptom continue to be grouped under the general heading "Fever". It is, therefore, clear that malaria alone could not have been the only cause of this large number of deaths, although this disease undoubtedly accounts directly or indirectly for the bulk of these deaths.

The death-rate for fever during 1936 was 14.0. The highest death-rates were recorded in the districts of Khondmals (28.5), Angul (19.7) and Balasore (18.6). Amongst the towns, Kendrapara (16.4) and Puri (15.2) reported highest death-rates. Almost the entire area of Orissa is notorious for malaria, but the districts of Khondmals, Balasore and Koraput and the areas along the foreshore of Chilka Lake are most malarious. Malaria in severe epidemic form occurred during the year along the foreshore of Chilka Lake in Puri district, and it was ascertained that in the 98 villages so affected there were about 6,000 persons attacked with malaria and 80 per cent. of them had enlarged spleen. The District Board, Puri, took suitable measures to combat the epidemic and had appointed two doctors and three compounders to cinchonize the people. Malaria breaks out in this area every year in a very bad type, which is believed to be due to the large growth of rank vegetation along the foreshore of Chilka when the water of the lake recedes. There is a proposal under consideration for anti-malarial work in this area in co-ordination with the Puri District Board by clearing the weeds and by mass quinine and plasmoquine treatment.

The district of Koraput is notorious for malaria. A special staff is maintained by Government for anti-malarial operations in Koraput, Jeypore and Rayagada. The anti-malarial drainage scheme at Koraput is now taking shape.

No organised action has been taken to combat malaria in the province and it is hoped that with the appointment of a Malaria Officer and the necessary staff the problem will be tackled to some extent.

The field experiment to demonstrate the effects of Paris green on paddy crops was again repeated during 1936 in the Government Farm at Khurda Road under the supervision of the Deputy Director of Agriculture, Health Officer, District Board, Puri, and the Malaria Inspector, Bengal-Nagpur Railway. The result of the experiment carried out during the year again proved inconclusive. However, in view of certain doubts, it is proposed that the experiment should again be carried out next year in the Government Agricultural Farm at Cuttack under the direct supervision of the Deputy Director of Agriculture.

2. **Sale of quinine.**—Sale of quinine treatments in various post offices in North Orissa has been in force for many years. These treatments are supplied to the post offices by Civil Surgeons, who obtain their requirements from the Presidency Jail at Calcutta, where the products of the cinchona plantations in Bengal are made up into tablets. Twenty tablets of four grains each packed in small tubes constitute one treatment and is sold at the post offices at 4 annas three pies per treatment. The amount purchased during the year under report cannot be regarded as satisfactory.

In South Orissa quinine powder manufactured at the Naduvattam factory of the Government of Madras continued to be sold through post offices at the rate of 3 pies per powder up till 1st October 1936. These post offices used to get quinine advance from the Superintendent of Prisons, Madras, in small packets, each containing 100 ten-grain powders and each powder was sold at the rate of 3 pies per powder. But since the transfer in October 1936 of



the Berhampur head post office with all its sub-offices to Sambalpur Division, the quinine advances held by the post offices of this area were withdrawn by the Superintendent of Prisons, Madras. However, it was proposed that the sale of quinine in treatments manufactured by the Presidency Jail, Alipore, should be introduced in this area through post offices, as in North Orissa.

**3. Free distribution of quinine by Government.**—The province of Orissa got as its share 1,322 lbs. and 8 oz. of quinine from the Governments of Bihar, Madras and Central Provinces out of the free supply of the Government of India. Out of this stock, 508 lbs. of quinine were supplied for free distribution in all the malaria-affected areas of the province.

The statement below shows the quantity of quinine supplied to each district of the province for free distribution:—

District.				Quantity supplied.
				lbs.
Ganjam	...	...	...	80
Koraput	...	...	...	60
Balasore	...	...	...	80
Sambalpur	...	...	...	60
Cuttack	...	...	...	76
Angul	...	...	...	2
Puri	...	...	...	60

Besides the above, 90 lbs. of quinine were supplied to the Director of Public Instruction for distribution to schools of the province, specially in the areas which are most malarious.

## CHAPTER IX.

**Maternity and child welfare.**—No special provision exists in the province to ascertain the maternal mortality rate, either for the rural or the urban areas. The infant mortality rate for the rural and urban areas of the province was 199·4 and 174·6 per mille of births registered. No special method has yet been employed to classify the causes of infant mortality. The village chaukidars or the village headmen as usual reported the deaths, mentioning cause of deaths as stated by the parents and guardians. The infant death-rate continues at a high level, due to the lack of an efficiently trained midwifery service, specially in the rural areas and also due to the superstition, carelessness, religious prejudices and unhygienic habits, etc., of the great mass of the people.

Child welfare and maternity work and all activities connected therewith are controlled by the Provincial Child Welfare and Maternity Society and the Public Health Department. During the year under report, the province had no central society of its own formed at the headquarters, but the Bihar and Orissa Child Welfare and Maternity Society continued to function in office in North Orissa. The Society sanctioned a grant of Rs. 2,100 to the two centres at Cuttack and Balasore, an amount which is equal to the contribution the Orissa Government made to the Bihar and Orissa Society for the year 1936-37.

Special forms and registers have been prescribed by the Bihar and Orissa Child Welfare and Maternity Society which each centre is required to maintain and periodical returns in the forms prescribed for the purpose are regularly submitted to the office of the Director of Health and Prisons Services showing the amount and progress of work done by the staff.

The province has four important centres at which maternity and child welfare work is carried on in an organised way. These centres are at



Cuttack, Balasore, Sambalpur and Berhampur. They are each managed through a local committee formed for the purpose and maintained by funds collected through contributions received from the local bodies, Bihar and Orissa Maternity and Child Welfare Society and public donations. Whole-time maternity supervisors with medical qualifications have been appointed for the centres at Cuttack and Berhampur. At Sambalpur and Balasore the work is supervised by the lady doctors attached to the Sadar hospitals. The whole work is done under the general supervision of the Civil Surgeon. The total number of labour cases, attended both at home and at the hospital by the midwives and the maternity supervisors at the above four centres is 1,261. Only abnormal cases are sent to the hospitals. There are also maternity wards attached to all the sadar hospitals provided with beds which receive maternity cases, both post and antenatal.

Besides the above four centres, there are also two small centres at Puri and Parlakimedi. They are maintained at the cost of the municipalities concerned.

In the rural areas, however, no organised effort has been made to start child welfare and maternity centres. There are only two such centres—one at Chatrapur in Ganjam district and the other at Khurda in Puri district. Midwives or trained *dais* have been appointed by Government and local bodies at several of the dispensaries in the rural areas of the Ganjam and Koraput districts and also in some districts in North Orissa. Maternity services are afforded to the village women through these midwives and trained *dais* within a radius of a few miles of the dispensaries to which they have been attached. This particular form of service requires further development.

There is no provision for the training of midwives in higher standard according to the syllabus laid down and contemplated either in the Bihar and Orissa or the Madras Medical Board Examination Rules, but classes are held for the training of *dais* in accordance with the Victoria Memorial Scholarship Fund Syllabus in most of the important sadar and subdivisional hospitals.

The Baptist Mission Zenana Hospital at Berhampur also does some amount of maternity and child welfare work and trains up nurses and *dais*.

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## CHAPTER X.

**School hygiene and medical inspection of school children.**—The Government maintain a special staff for the medical examination of scholars of the high English schools and in certain middle English schools where there are high English schools.

There is one School Medical Officer of Assistant Surgeon cadre and one Assistant School Medical Officer of Sub-Assistant Surgeon class for this province. These officers inspect all the high English schools and most of the middle English schools of the province. Besides these, some of the medical officers of health of the district boards and medical officers in charge of district board dispensaries also carry out medical examination of the students of the middle schools which are situated at places where there is no high English school. The system of medical inspection was confined to North Orissa only. No medical examination of scholars was done in the ex-Madras area during the year under report. The provincial Government have since ordered to extend the North Orissa system to this area also from next year.

**2. Medical examination of scholars.**—Usually all the new scholars admitted to the schools since the previous visit of the School Medical Officer are thoroughly examined and a complete medical history of each new entrant is recorded on a prescribed form. All scholars found to be suffering from physical defects at a previous inspection are re-examined and a further note on the defects recorded. At the end of the inspection, parents or guardians of boys found to be suffering from physical defects are informed of the



particular defects the boys are suffering from and they are recommended to consult their medical attendants or to take the boys for treatment to the nearest dispensary. The medical officers of the dispensaries or hospitals are required to note on the counterfoils of the forms the treatment the boys have received and the results achieved.

The following is a statement showing the number of children examined by the Government School Medical Officer and number recommended for treatment in 1936:—

Number of children examined	...	...	1,821
Number recommended for treatment	...	...	1,282
Percentage of those recommended	...	...	70 per cent.

The following is a statement showing the number of children of middle schools and number recommended for treatment during 1936 by the district boards' health staff:—

Number of children examined	...	...	3,048
Number recommended for treatment	...	...	1,556
Percentage of those recommended	...	...	51 per cent.

*Lectures on hygiene.*—The School Medical Officer as usual delivered a series of lectures on hygiene, sanitation and the epidemic diseases common in India to the students of the X and XI classes of the high schools of the province. Most of these lectures were illustrated with magic-lantern slides and 250 such lectures were delivered during the year. Attendance at ten such lectures is compulsory to every boy before he is allowed to sit for the Matriculation Examination, but as hygiene is neither a compulsory nor an optional subject in the Matriculation Examination, the lectures do not generally receive quite the attention they deserve. These lectures, however, afford an opportunity for the propagation of knowledge and information on public health subjects and are expected to awaken an interest in the minds of the boys for healthy living and prevention of diseases.

Special lectures were also delivered to teachers of primary schools, members of the inspecting staff of the Education Department and to head masters on various subjects on public health interest during the summer vacation by the School Medical Officer.

The schools and hostel buildings are regularly inspected by the School Medical Officer during his visit to each school. Seventy-nine such school premises were inspected during the year and the defects found were pointed out to the educational authorities for remedying them. These inspections have led to improved sanitation, better provision of urinals, latrines and drinking water-supply for both day and night scholars.

The School Medical Officer, during his inspection of each school, also looks into the arrangements made for the proper and balanced diet of the scholars, for physical exercises, games and suitable sitting accommodation in the class rooms and, by his constant advice, he tries to impress upon the head masters, guardians and parents that in their zeal to impart mental education the physical development of the child should not be neglected.

Unfortunately no arrangement has yet been made for the medical examination of girl students in the province for want of a Lady School Medical Officer. The proposal to appoint one such officer for the province is under the consideration of Government.

## CHAPTER XI.

### Health propaganda.

Health propaganda was carried out by the public health staff of the province throughout the year under report, as this work is one of the routine



duties of the district health staff. The public health staff of each district delivered a series of lectures in their respective districts with and without magic-lanterns. Leaflets and pamphlets on the prevention of cholera and small-pox in the vernacular language of the province were widely distributed, especially during epidemics of cholera and small-pox.

At larger festivals interesting posters on public health subjects were hung up at important places and at railway stations to attract the notice of the pilgrims and hygiene lectures and magic-lantern demonstrations were given.

In the districts of Ganjam and Koraput Health Weeks were celebrated throughout the district. This celebration afforded an opportunity for intensive propaganda. It is proposed that this kind of celebration should be performed in all the districts of the province.

## CHAPTER XII.

### Public Health Administration.

The following staff was maintained by Government for public health work from 1st April to 31st December 1936 :—

- (1) Director of Health and Prisons Services.
- (2) Three medical officers of health of provincial service.
- (3) Two second class medical officers of health of subordinate service.
- (4) One School Medical Officer of provincial service.
- (5) One Assistant School Medical Officer of subordinate service.
- (6) Two Inspectors of Vaccination.
- (7) Four Sub-Inspectors of Vaccination.
- (8) Nineteen Health Inspectors.
- (9) Thirty-four vaccinators.

As no Assistant Director of Public Health was employed during the year under report the Director of Health and Prisons Services alone supervised the sanitation and public health of the province and gave all necessary advice on public health matters to the local bodies on the improvement of all sanitary matters.

The three medical officers of health who possess special public health qualifications belong to the provincial service. Two of them have been appointed as Health Officers of the two important towns of Cuttack and Puri. The third one is the District Health Officer of Ganjam.

The two second class medical officers of health have been appointed as the Health Officer, Berhampore Municipality, and the Assistant Health Officer, Koraput Agency. The School Medical Officer and his assistant were employed in the medical examination of scholars of high English schools and all middle English schools situated near about these high schools.

The Inspectors of Vaccination, Sub-Inspectors of Vaccination and the Health Inspectors are employed for carrying out public health and vaccination work in rural areas under the supervision of Health Officers or Civil Surgeons, as the case may be.

Besides the above regular staff, epidemic doctors of Sub-Assistant Surgeon class were employed temporarily, when necessary, to help local bodies in combating epidemics in the province.

## CHAPTER XIII.

### Vaccination.

The Annual Vaccination Report is submitted as an annexure to this report.



## CHAPTER XIV.

### Other Public Health Services.

**Public Health Laboratories.**—There was no separate Public Health Laboratory for the province of Orissa during the year under report. The articles required for the chemical and bacteriological examinations were examined in the Public Health Laboratory, Patna, and in the King Institute, Guindy, Madras. During the year, 377 articles were chemically and bacteriologically examined, out of which 274 articles were examined in the Public Health Laboratory, Patna, and 103 articles in the King Institute, Guindy, Madras.

*Water.*—One hundred and forty-two samples of water taken from the various sources of water-supply of the province were got chemically and bacteriologically examined during the year under report.

*Food-stuff.*—The total number of samples examined was 235. The following are the various samples of food-stuffs examined and the number found adulterated :—

*Ghee.*—One hundred and twenty-eight samples were examined, of which 85 or 66 per cent. were found adulterated. Sixteen samples were found to be of doubtful purity.

*Mustard oil.*—Thirty samples of mustard oil were examined, out of which 11 or 37 per cent. were found adulterated.

*Sweets.*—Eight samples of sweets were examined with a view to find out if they were made of pure ghee or oil. Out of the eight samples seven or 87 per cent. were found to have been made of ghee and oil which were below the standard.

*Milk.*—Thirty-four samples of milk were got examined, out of which 28 or 82 per cent. were found adulterated.

*Atta.*—Three samples of wheat flour were examined, but all of them were found to be genuine.

One sample of honey was examined and found to be genuine.

*Miscellaneous.*—Fifteen samples of vegetable fats, 15 samples of linseed oil and one sample of sesame oil were analysed to determine their purity. Eight samples of vegetable fats, and three samples of linseed oil were found to be non-genuine.

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## CHAPTER XV.

### General Remarks.

**Incidence of cerebro-spinal fever.**—Fifty-five cases of cerebro-spinal fever were treated in hospitals and dispensaries of the province during the year. Out of these cases five proved fatal.

**2. Notification of infectious diseases.**—The Bihar and Orissa Municipal Amendment Act, 1935, which provides for the compulsory notification of cases suffering from certain infectious diseases, namely, cholera, small-pox, plague and tuberculosis, by the occupier of the house, a manager of a factory, *dharamsala*, hotel or a *sarai*, where a case occurs, and by the medical practitioner treating such a case, to the Health Officer, the Civil Surgeon of the district or the Commissioner, continued to be in force in all the municipalities of North Orissa. In the municipalities of South Orissa the notification of certain infectious diseases is made compulsory under the Madras District Municipalities Act with the special sanction of the Collector of the district in the event of an outbreak of any infectious disease in a municipality. The enforcement of the Act facilitates the health staff in undertaking preventive measures as soon as a case is reported and thus checks the further spread of the disease with greater celerity.



**3. Outbreak of jhin-jhinia.**—A peculiar kind of disease, popularly known as jhin-jhinia, occurred in the district of Balasore in the first week of February 1936. It broke out like an epidemic disease and more than three thousand persons were reported sick in this district. Cases of this disease were reported from the districts of Cuttack, Puri and Ganjam in the months of March, May and June, respectively. Sambalpur and Koraput remained free from this disease. Although it spread in an epidemic form in the above districts no deaths were reported, except in a couple of cases, which were rather due to various other complications. The notable feature of the disease was that the incidence of attacks among the females was more than in males and the duration of the disease in a village was 7 days on an average. There was one symptom that was absolutely constant in all the cases and that was a tingling sensation of the sole of the foot or feet, usually of the big toe. Another symptom was feeling of pressure in the head with or without actual headache and lastly there was a violent trembling of the whole body. In Balasore district, where the disease first broke out, the blood of four patients out of seven was examined but was found to contain malaria parasites. From the reports received it was evident that the signs and symptoms indicated some disturbances of the nervous system. The disease, if it can be called a disease at all, is somewhat akin to hysteria, but the epidemic of the disease is of a purely nervous character and is not known to have occurred before.

Different methods of treatment of the disease were adopted in different places, but putting of ice or a piece of wet cloth on the head of the patient and smelling-salts given for inhalation to regain consciousness have been commonly administered everywhere with good results. As there was a great panic among the people, leaflets in the vernacular were widely distributed by the District Board health staff giving symptoms of the disease and the treatment to be adopted. It was impressed upon the public that the disease was absolutely harmless.

**4. Urban and rural housing conditions.**—It is not possible to furnish detailed statement on rural and urban housing conditions, because the subject has not as yet been made one for special action and enquiries.

As regards urban areas, housing improvements are gradually but steadily effected through the powers given under the Bihar and Orissa Municipal Act and the Madras District Municipalities Act. New buildings and alterations to old buildings cannot be carried out unless the plans are approved by the municipality and, where there is a qualified health officer, new houses are only allowed to be constructed when they come up to certain simple standards of sanitation and ventilation as well as structural safety. In certain municipalities special staff are employed to detect and take steps for the removal of encroachments on public roads and spaces which not only interfere with the traffic but also tend to increase overcrowding. Anything more ambitious on the lines of town planning requires more funds than the ordinary municipality can run to.

In the Berhampur Municipality of the Ganjam district, however, there is a town planning committee for the town which prepares lay-outs of the vacant sites and selects the plots suitable for house sites. There is also a co-operative bank in the town which grants loans to those who build houses. There is a house building society which grants loans to the extent of 50 per cent. of the total cost of construction to be paid back to the society. Two plots of land have been set apart for industrial housing far away from dwelling-houses and the factories are constructed in this area.

In Orissa there are no large industries which have necessitated large bodies of labourers living on the spot and the question of industrial housing has hardly yet arisen. The labourers working in small factories in towns live in the municipal areas and their suburbs.

In rural areas the houses are, as is generally known, crowded together in small *bustee* sites without any plan and with no means of sanitation. The average house consists of a thatched roof on a wooden framework with walls of mud plinth varying in height according as the site is liable to flooding or not and the floor space of an average house is about 25×10 feet, some are



small and some large. The ventilation in most cases is totally inadequate. Well-to-do people are beginning to construct more roomy and better ventilated houses, but any efforts at improving *bustee* conditions so far through peoples welfare committees and similar organisations, have been directed in the first instance to attempts to improve the sanitation of the surroundings and the cleaning of village roads. In the primary schools miniature model houses are made by way of instruction, having proper ventilation.

The local Government has just formulated a scheme called the village welfare scheme. The programme includes the improvement of the houses in the villages. A village in the district of Cuttack has been selected for the purpose in which houses on improved sanitary lines have been constructed for all the officers engaged locally for village welfare work to serve as a model. The Welfare Officer carries out propaganda and instructs people to construct houses on sanitary lines.

**5. Leprosy Relief.**—Owing to the separation of the province, with effect from the 1st April 1936, the Provincial Branch of the British Empire Leprosy Relief Association for Orissa could not be inaugurated until early in 1937.

Fifty-four outdoor leprosy clinics functioned during the year under report and the number of attendance at these clinics was 41,711. There is only one leper asylum at Cuttack and one leper colony at Puri. In the former, there is accommodation for 360 indoor patients and in the latter for 71 patients only. The Cuttack Leper Asylum is maintained and managed entirely by the "Mission to Lepers in India". It receives a *per capita* grant from Government at the rate of Rs. 3 per mensem. There is a proposal for the extension of the buildings to provide accommodation for more patients. The leper colony at Puri is managed by a committee with contributions from the local bodies and public charity. The medical officer in charge is a Government servant.

In North Orissa, all the outdoor leper clinics are maintained by the local bodies concerned with grants-in-aid from Government and the Provincial Leprosy Relief Committee. In South Orissa, there is no leper asylum or colony for the treatment of indoor patients. In Ganjam, a District Leprosy Relief Committee has been formed and is doing useful work in tackling the leprosy problem in the district. It is hoped that other districts will follow suit very soon.

The incidence of leprosy in the province is unfortunately very high. The accommodation for the treatment of patients, indoor, available at Cuttack and Puri is too negligible, considering the appalling number of leper cases. An asylum, one each at Sambalpur and Ganjam, is considered an absolute necessity.

It is hoped that with the appointment of a Leprosy Relief Officer for the province and organisation of District Leprosy Relief Committees the whole problem will be tackled in all possible ways with the resources available.

**6. Personal proceedings and office.**—Captain P. L. O'Neill, I.M.S., held charge of the office of the Director of Health and Prisons Services from the 1st to the 26th of April 1936, while Lt.-Col. G. Verghese, M.D., Ch.B., D.P.H., D.T.M., D.T.H., I.M.S., remained in charge of the department for the remaining period of the year.

**7. Touring.**—During the period from April to the end of the year the Director of Health and Prisons Services was on tour for 53 days.

**8. Personnel.**—I am glad to report that the Department has had to work under heavy odds, being the first year of the formation of this separate province. I should like to bring to the notice of Government the excellent work done by one and all in the department, including the Public Health staff of the district boards and municipalities and for the cheerful spirit and co-operation they have displayed in shouldering heavy strains of responsibility during the anxious times of epidemics and fairs and festivals. The help rendered by my office staff in general has been invaluable.

G. VERGHESE, LT.-COL., I.M.S.,  
*Director of Health and Prisons Services, Orissa.*



## Annual Vaccination Report of the Province of Orissa for the year 1936-37.

The statistics in the Vaccination Report are for the financial year while the statistics in the Annual Public Health Report are for the calendar year. The arrangement facilitates the inclusion of the figures for the complete vaccination season from October to March in the Vaccination Report.

2. *Staff*.—Captain P. L. O'Neill, I.M.S., held charge of the office of the Director of Health and Prisons Services from the 1st to the 26th of April 1936, while Lt.-Col. G. Verghese, I.M.S., remained in charge of the department for the remaining period of the year.

The provincial vaccination inspecting staff consisted of 2 District Inspectors of Vaccination, 4 Sub-Inspectors of Vaccination, 19 Health Inspectors and 34 vaccinators. The total number of vaccinators employed during the year 1936-37 was 234, of whom 12 were employed in towns and 222 in rural areas. Vaccination is performed by paid vaccinators in the municipal areas and also in the districts of Ganjam and Koraput, while licensed vaccinators are generally employed to perform vaccination in the rest of the areas of the province. Vaccination is compulsory in all the municipalities of the province and in the plains portion of Ganjam and the district of Puri. In the rest of the province, except in the district of Koraput and Agency portions of Ganjam district, vaccination is performed on a license system. In these places the licensed vaccinator is allowed to charge a fee of annas two for each vaccination operation performed in the houses. There are also free vaccination depôts in each district, which are attended by the vaccinators on fixed days in a week and no fee is charged for carrying out vaccination at these depôts. Besides these licensed vaccinators, paid vaccinators are also employed by the local bodies for short periods to deal with outbreaks of small-pox.

3. *Operations performed*.—6,03,006 vaccination operations were performed during the year and 5,97,378 operations were performed by the vaccination staff only. Although vaccination is generally recognised as the only preventive measure against small-pox, it has not yet become as popular as it should be with the masses in the province. When small-pox breaks out in an epidemic form the people show some degree of willingness to get their children vaccinated, but when the epidemic is absent, the incentive is much less and the number of vaccinations performed also fall.

Out of the total number of operations performed in the province, 3,63,123 operations were found successful, of which 1,97,148 were primary and 1,65,975 were re-vaccinations. The ratios of success were 94.48 per cent. for primary and 64.19 per cent. for re-vaccinations. In rural areas 5,71,427 operations were performed, of which 2,19,488 were primary and 3,51,939 were re-vaccinations. The ratios of success were 94.56 per cent. and 65.18 per cent. for primary and re-vaccinations, respectively. In municipalities, 25,951 operations were performed, of which 6,597 were primary and 19,354 were re-vaccinations. The ratios of success were 91.98 per cent. and 54.45 per cent. for primary and re-vaccinations, respectively.

4. *Vaccination in districts*.—In the districts of Cuttack, Puri and Balasore, 81,368, 54,414 and 48,888 operations were performed, respectively, and the persons successfully vaccinated per 1,000 of population in those districts were 22.33, 32.97 and 39.92, respectively. In all these districts vaccination is controlled by the health officers of the district boards.

In the districts of Sambalpur, Koraput, Angul and Khondmals, 1,52,158, 68,306, 5,555 and 11,601 operations were performed, respectively, and persons successfully vaccinated per 1,000 of population in those districts were 88.94, 45.56, 35.22, 86.52, respectively. The Civil Surgeon of the districts of Cuttack and Ganjam controlled the vaccination of Angul and Khondmals districts, respectively. The Agency Surgeon, Koraput, supervised the vaccination of Koraput district and the Civil Surgeon, Sambalpur, of Sambalpur district.



180,716 operations were performed in the district of Ganjam and 58·66 persons were successfully vaccinated per 1,000 of population of the district during the year under report. The vaccination in the Agency portion of the district is controlled by the Civil Surgeon of Ganjam and the plains portions by the District Health Officer, Ganjam.

5. *Vaccination in towns.*—Statement V shows that during the year 1,892 children under one year of age out of an available number of 4,737 or 39·94 per cent. were successfully vaccinated.

6. *Protection of infants.*—During the year under report the number of children under one year available for vaccination was 214,109 and the number of successful operations was 67,845 or 31·7 per 1,000. The protection of infants in municipalities is separately shown in Statement V. It gives a ratio of 399 per 1,000 of the surviving population.

These figures still remain unsatisfactory, inasmuch as they show that nearly two-thirds of the total number of infants under one year left unvaccinated in the rural areas and more than one-half in the municipal areas. This is attributed to the common prejudice of the people against vaccination at an early age. Though primary vaccination is compulsory in all the municipal towns and in two districts of the province, vaccination of the infants and children is avoided by many people. There are obvious advantages in retaining the present age-limit for compulsory primary vaccination. No untoward complications occur after early vaccination and people should be educated in the benefit of early vaccination, because the sooner an unprotected child is vaccinated, the quicker it acquires protection against the disease and ceases to remain a source of danger to the community.

7. *Prevention of small-pox.*—The proportion of vaccinated persons in the province still remains far below the figure necessary to prevent epidemic outbreaks and although the total vaccination operations during the year was 603,006, this is quite insufficient to ensure the immunity of the total population against small-pox. This state of affairs is not so much due to insufficiency or inefficiency of the existing arrangements for vaccination in the province, but is chiefly due to the inherent apathy of the public towards the simple and efficient method of protection. Small-pox is a preventable disease and vaccination can prevent it. In the light of this knowledge and in the face of the unsatisfactory vaccination state of the people, there is great necessity for a more vigorous and complete vaccination policy. Primary vaccination has been made compulsory for many years in all municipal towns, but all the provisions of the Act do not appear to be rigidly enforced, with the result that a great proportion of the children does not get vaccination until they cross the first year of their lives. Besides, a large number of unvaccinated persons are to be found in every municipal town.

The incidence of small-pox can be definitely prevented, provided repeated vaccinations are practised, but re-vaccinations are always accepted with reluctance and the people do not realise that the immunity conferred by primary vaccination wears out within 5 to 7 years. Thus during epidemics the percentage of protected persons is small and not until the disease has had its toll, that the public realise the importance of re-vaccination. Prejudices born of ancient traditions die hard and appear to be the chief obstacles in the way of pushing vaccination among the masses. Much of the efforts of the public health staff has, therefore, to be directed towards overcoming these obstacles. Vaccination operations are easily done and generally cause no complications. No case of encephalitis following vaccination has so far been recorded in the province.

Almost all the district boards with health organisation schemes have now assumed the responsibility of the control of vaccination in the rural areas and the vaccination schemes are mostly self-supporting.

The Bengal Vaccination Act is enforced in the district of Puri only. Vaccination and re-vaccination are also compulsory in the plains portion of



Ganjam district, under the Madras Local Boards Act of 1920. It is absolutely necessary that vaccination should be made compulsory throughout the province.

8. *Inspection of work.*—During the year under report the Director of Health and Prisons Services inspected 368 primary and 5 re-vaccinations. The percentages of success to total number inspected were 97·55 and 60·00 for primary and re-vaccinations, respectively.

The Superintendents of Vaccination of the province inspected 6,832 primary and 10,253 re-vaccinations. The percentage of cases found successful to the total number inspected was 91·25 for primary and 73·32 for re-vaccinations.

9. As this province has no vaccine depôt of its own vaccine lymph was purchased from the Bihar Government's vaccine depôt at Namkum and was supplied free to the local bodies of the province. Vaccine lymph amounting to Rs. 5,669 was purchased from the vaccine depôt, Namkum, for carrying out vaccination.

10. *Cost of the Department.*—The total cost of the Vaccination Department, excluding the cost of vaccine lymph, during the year, as noted in Statement I, was Rs. 69,766-1-3. The cost of each successful case of vaccination was 3 annas 1 pie. If, however, the cost of vaccine lymph is included, the cost per successful vaccination case stands at 3 annas 3½ pies.

G. VERGHESE, LT.-COL., I.M.S.,  
*Director of Health and Prisons Services, Orissa.*

**Summary of the activities of the Public Health Circle relating to sanitary improvements in rural and urban areas of Orissa during the calendar year 1936.**

1. *Construction—Puri water-supply.*—With the exception of providing a water-supply to the staff-quarters, of erection of meter-testing plant and installation of one zone meter, work on the main scheme has been completed. Work on the supplementary scheme for extension of the distribution system has been completed.

*Kendrapara.*—A 3" tube well with a hand-pump was completed.

2. The Puri water-supply was maintained in a state of efficiency on behalf of the Puri Joint Water Works Committee and a satisfactory supply of pure water has been given throughout the year.

S. E. PLATT,

*Superintending Engineer,  
Public Health Circle, Bihar.*

*The 5th June 1937.*



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APPENDIX I.  
Annual Form No. 1.

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ANNUAL FORM NO. 1—*Births registered in the*

2		3			4		
No.	Districts.	Population for which returns were received.			Number of births registered.		
		Male.	Female.	Total.	Male.	Female.	Total.
1	Cuttack ...	1,028,134	1,148,573	2,176,707	41,184	38,747	79,931
2	Balasore ...	480,518	510,082	990,600	16,801	16,112	32,913
	Puri ...	500,214	534,940	1,035,154	18,932	17,935	36,867
4	Sambalpur ...	522,140	543,470	1,065,610	19,585	18,539	38,124
5	Angul ...	68,694	71,764	140,458	2,947	2,917	5,864
6	Khondmals ...	40,231	42,047	82,278	1,503	1,399	2,902
7	Ganjam Plains ...	614,839	743,316	1,358,155	28,609	27,046	55,655
	AGENCY DISTRICTS.						
8	Ganjam ...	41,895	43,293	85,188	1,076	1,007	2,083
9	Koraput ...	9,670	9,940	19,610	184	174	358
	Total of Agency Districts.	51,565	53,233	104,798	1,260	1,181	2,441
	Total for the province ...	3,306,335	3,647,425	6,953,760	130,821	123,876	254,697



DIX I.

districts of Orissa province during the year 1936.

5			6			1
Ratio of births per 1,000 of population.			Mean ratio of births per 1,000 during previous five years.			No.
Male.	Female.	Total.	Male.	Female.	Total.	
18·9	17·8	36·7	18·8	17·6	36·4	1
16·9	16·3	33·2	16·6	15·7	32·3	2
18·8	17·3	35·6	19·7	18·6	38·3	3
18·4	17·4	35·8	...	...	...	4
21·0	20·7	41·7	...	...	...	5
18·3	17·0	35·3	...	...	...	6
21·1	19·9	41·0	...	...	...	7
12·6	11·8	24·4	...	...	...	8
9·4	8·9	18·3	...	...	...	9
12·0	11·3	23·3	...	...	...	
18·8	17·8	36·6	...	...	...	

ANNUAL FORM NO. 1A.—Births registered according to class in each town

1		2			3				
Registering circle.		Christians.			Hindus.				
		Male.	Female.	Total.	Male.	Female.	Total.		
CUTTACK.									
Cuttack town	...	14	10	24	359	340	699		
Kendrapara town	...	...	...	...	132	130	262		
Jajpur town	...	...	...	...	120	126	246		
Total of towns	...	14	10	24	611	596	1,207		
Total of rural	...	...	1	1	39,483	37,165	76,648		
Total of district	...	14	11	25	40,094	37,761	77,855		
BALASORE.									
Balasore town	...	3	1	4	134	121	255		
Total of rural	...	13	16	29	15,800	15,193	30,993		
Total of district	...	16	17	33	15,934	15,314	31,248		
PURI.									
Puri town	...	...	2	2	497	492	989		
Total of rural	...	15	11	26	18,001	17,038	35,039		
Total of district	...	15	13	28	18,498	17,530	36,028		
SAMBALPUR.									
Sambalpur town	..	...	...	...	194	156	350		
Total of rural	...	1	2	3	19,320	18,316	37,636		
Total of district	...	1	2	3	19,514	18,472	37,986		
ANGUL.									
Total of rural	...	1	...	1	2,945	2,915	5,860		
Total of district	...	1	...	1	2,945	2,915	5,860		
KHONDMALS.									
Total of rural	...	1	...	1	450	434	884		
Total of district	...	1	...	1	450	434	884		
GANJAM PLAINS.									
Berhampur town	...	11	10	21	841	782	1,623		
Parlakimedi town	...	2	3	5	368	376	744		
Total of towns	...	13	13	26	1,209	1,158	2,367		
Total of rural	...	59	74	133	27,067	25,570	52,637		
Total of district	...	72	87	159	28,276	26,728	55,004		
AGENCY DISTRICTS.									
Ganjam	...	11	5	16	1,033	965	1,998		
Koraput	...	4	6	10	174	161	335		
Total of Agency Districts	...	15	11	26	1,207	1,126	2,333		
Total for the Province	{	Towns	...	30	26	56	2,645	2,523	5,168
		Rural	...	105	115	220	124,273	117,757	242,030
		District	...	135	141	276	126,918	120,280	247,198



DIX I—contd.

and rural areas in the districts of Orissa province during the year 1936.

4			5			6			7		
Muhammadans.			Buddhists.			Other classes.			Total.		
Male.	Female.	Total	Male.	Female.	Total.	Male.	Female.	Total.	Male.	Female.	Total.
61	50	111	...	...	...	...	...	...	494	400	894
86	45	81	...	...	...	...	...	...	168	175	343
7	6	13	...	...	...	...	...	...	127	132	259
104	101	205	...	...	...	...	...	...	729	707	1,436
972	874	1,846	...	...	...	...	...	...	40,455	38,040	78,495
1,076	975	2,051	...	...	...	...	...	...	41,184	38,747	79,931
58	50	108	...	...	...	...	...	...	195	172	367
429	408	837	...	...	...	364	323	687	16,603	15,940	32,546
487	458	945	...	...	...	364	323	687	16,801	16,112	32,913
2	3	5	...	...	...	...	...	...	499	497	996
385	367	752	...	...	...	32	22	54	18,433	17,438	35,871
387	370	757	...	...	...	...	22	54	18,932	17,935	36,867
...	...	...	...	...	...	...	...	...	194	156	350
5	10	15	...	...	...	65	55	120	19,391	18,383	37,774
5	10	15	...	...	...	65	55	120	19,585	18,539	38,124
1	2	3	...	...	...	...	...	...	2,947	2,917	5,864
1	2	3	...	...	...	...	...	...	2,947	2,917	5,864
1	...	1	...	...	...	1,051	965	2,016	1,503	1,399	2,902
1	...	1	...	...	...	1,051	965	2,016	1,503	1,399	2,902
44	35	79	...	...	...	...	...	...	896	827	1,723
3	7	10	...	...	...	...	...	...	373	386	759
47	42	89	...	...	...	...	...	...	1,269	1,213	2,482
60	47	107	...	...	...	154	142	296	27,340	25,838	53,178
107	89	196	...	...	...	154	142	296	28,609	27,046	55,655
...	2	2	...	...	...	32	35	67	1,076	1,007	2,083
6	7	13	...	...	...	...	...	...	184	174	358
6	9	15	...	...	...	32	35	67	1,260	1,181	2,441
211	196	407	...	...	...	...	...	...	2,886	2,745	5,631
1,859	1,717	3,576	...	...	...	1,698	1,542	3,240	127,935	121,131	249,066
2,070	1,913	3,983	...	...	...	1,698	1,542	3,240	130,821	123,876	254,697

ANNUAL FORM NO. IB.—Still-births registered according to class in each town and rural

1	2			3		
Registering circle.	Christians.			Hindus.		
	Male.	Female.	Total.	Male.	Female.	Total.
CUTTACK.						
Cuttack town ..	1	...	1	24	9	33
Kendrapara town ..	...	...	...	2	4	6
Jajpur town ..	...	...	...	3	...	3
Total of towns ...	1	...	1	29	13	42
Total of rural ..	...	...	...	3,073	2,449	5,522
Total of district ..	1	...	1	3,102	2,462	5,564
BALASORE.						
Balasore town ..	...	...	...	3	4	7
Total of rural ..	...	...	...	1,551	1,362	2,913
Total of district ..	...	...	...	1,554	1,366	2,920
PURI.						
Puri town ..	...	...	...	48	25	73
Total of rural ..	...	...	...	1,808	1,448	3,256
Total of district ..	...	...	...	1,856	1,473	3,329
SAMBALPUR.						
Sambalpur town ..	...	...	...	...	4	4
Total of rural ..	...	1	1	161	115	276
Total of district ..	...	1	1	161	119	280
ANGUL.						
Total of rural ..	...	...	...	44	30	74
Total of district ..	...	...	...	44	30	74
KHONDMALS.						
Total of rural ..	...	...	...	10	6	16
Total of district ...	...	...	...	10	6	16
GANJAM PLAINS.						
Berhampur town ...	...	...	...	30	23	53
Parlakimedi town ..	...	...	...	8	10	18
Total of towns ...	...	...	...	38	33	71
Total of rural ...	1	1	2	315	283	599
Total of district ..	1	1	2	351	319	670
AGENCY DISTRICTS.						
Ganjam ...	...	...	...	2	4	6
Koraput ...	...	...	...	2	3	5
Total of Agency Districts ...	...	...	...	4	7	11
Total of the province—						
Towns ...	1	...	1	118	79	197
Rural ...	1	2	3	6,964	5,703	12,667
Districts ...	2	2	4	7,082	5,782	12,864



## DIX—I—contd.

areas in the districts of Orissa province during the year 1936.

4			5			6			7		
Muhammadans.			Buddhists.			Other classes.			Total.		
Male.	Female.	Total.	Male.	Female.	Total.	Male.	Female.	Total.	Male.	Female.	Total.
1	...	1	...	..	..	...	...	...	26	9	35
...	...	...	...	..	...	...	...	...	2	4	6
...	...	...	...	..	...	...	...	...	3	...	3
1	...	1	...	...	...	...	...	...	31	13	44
76	75	151	...	...	...	...	...	...	3,149	2,524	5,673
77	75	152	...	..	...	...	...	...	3,180	2,537	5,717
...	...	...	...	..	..	...	...	...	3	4	7
25	27	52	...	..	..	4	6	10	1,580	1,395	2,975
25	27	52	...	..	..	4	6	10	1,583	1,399	2,982
...	...	...	...	...	..	...	...	...	48	25	73
13	6	19	...	..	...	...	...	...	1,821	1,454	3,275
13	6	19	...	..	...	...	...	...	1,869	1,479	3,348
...	...	...	...	...	...	...	...	...	...	4	4
1	5	6	...	...	...	2	5	7	164	126	290
1	5	6	...	...	...	2	5	7	164	130	294
...	...	...	...	..	...	...	...	...	44	30	74
...	...	...	...	...	...	...	...	...	44	30	74
...	...	...	...	...	...	22	11	33	32	17	49
...	...	...	...	...	...	22	11	33	32	17	49
...	...	...	...	...	..	...	...	...	30	23	53
1	...	1	...	...	...	...	...	...	9	10	19
1	...	1	...	...	...	...	...	...	39	33	72
1	2	3	...	...	...	2	2	4	317	291	608
2	2	4	...	...	...	2	2	4	356	324	680
...	...	...	...	...	...	...	...	...	2	4	6
...	...	...	...	...	...	...	...	...	2	3	5
...	...	...	...	...	...	...	...	...	4	7	11
2	...	2	...	...	...	...	...	...	121	79	200
116	115	231	...	...	...	30	24	54	7,111	5,844	12,955
118	115	233	...	...	...	30	24	54	7,232	5,923	13,155

ANNUAL FORM NO. 11.—*Statement of deaths registered*

1	2	3	4	5		
No.	Districts.	Area in square miles.	Average population per square mile.	Number of deaths registered.		
				Male.	Female.	Total.
1	Cuttack ...	3,654	595	31,910	34,305	66,215
2	Balasore ...	2,055	482	15,272	16,847	32,119
3	Puri ...	2,492	415	14,044	14,592	28,636
4	Sambalpur ...	5,394	198	14,879	13,247	27,626
5	Angul ...	811	159	1,844	1,740	3,584
6	Khondmals ...	800	103	1,357	1,452	2,809
7	Ganjam Plains ...	3,567	381	15,660	15,271	30,931
	AGENCY DISTRICTS.					
8	Ganjam ...	504	169	769	691	1,460
9	Koraput ...	70	280	112	96	208
	Total of Agency Districts ...	574	183	881	787	1,668
	Total for the province ...	19,847	359	95,847	98,241	193,588



DIX I—contd.  
in the districts of Orissa Province during the year 1936.

6										7			
Death rate per 1,000 of population from—										Mean ratio of deaths per 1,000 during previous five years.			
Cholera.	Small-pox.	Plague.	Fever.	Dysentery and diarrhoea.	Respiratory diseases.	Injuries.	All other causes.	All causes.			Male.	Female.	Total.
								Male.	Female.	Total.			
1·9	0·9	...	13·9	3·9	0·6	0·6	8·5	31·0	29·9	30·4	33·5	31·0	32·2
1·9	0·5	...	18·6	0·5	0·1	0·5	10·4	31·8	33·0	32·4	33·1	33·1	33·1
0·4	0·2	...	11·2	3·4	1·1	0·5	10·9	28·1	27·3	27·7	30·5	29·4	29·9
1·2	0·6	...	13·3	1·3	1·2	0·3	7·9	27·5	24·4	25·9	...	...	...
1·6	0·09	...	19·7	0·2	0·05	0·7	3·2	26·8	24·2	25·5	...	...	...
...	1·3	...	28·5	0·06	0·07	0·8	3·5	33·7	34·5	34·1	...	...	...
0·02	0·23	...	12·4	1·5	0·7	0·2	7·7	25·5	20·5	22·8	...	...	...
0·04	0·08	...	12·8	0·8	1·1	0·3	2·1	18·3	16·0	17·1	...	...	...
...	...	...	5·1	0·9	1·0	0·4	3·3	11·6	9·6	10·6	...	...	...
0·03	0·07	..	11·4	0·8	1·0	0·3	2·3	17·1	14·8	15·9	...	...	...
1·1	0·5	...	14·0	2·3	0·7	0·4	8·6	28·8	26·9	27·8	...	...	...

## ANNUAL FORM NO. III.—Deaths registered in the districts of

1	2			3					
No.	Districts.			Population according to census, 1931.	January.	February.	March.	April.	May.
1	Cuttack district	...	{ Urban ... Rural ... Total ...	88,556 2,088,151 2,176,707	95 4,433 4,528	89 4,631 4,720	79 5,443 5,522	72 4,147 4,219	63 3,518 3,581
2	Balasore district	...	{ Urban ... Rural ... Total ...	17,843 972,757 990,600	23 2,481 2,504	29 2,526 2,555	33 2,585 2,621	23 2,334 2,357	26 1,967 1,993
3	Puri district	...	{ Urban ... Rural ... Total ...	37,568 997,586 1,035,154	119 2,089 2,208	89 2,441 2,530	111 2,328 2,439	59 2,153 2,212	85 1,884 1,969
4	Sambalpur district	...	{ Urban ... Rural ... Total ...	15,017 1,050,593 1,065,610	17 1,968 1,985	13 1,854 1,867	16 2,045 2,061	32 2,062 2,094	21 2,410 2,431
5	Angul district	...	{ Rural ... Total ...	140,458 140,458	311 311	306 306	444 444	249 249	237 237
6	Khondmal district	...	{ Rural ... Total ...	82,278 82,278	244 244	237 237	270 270	263 263	278 278
7	Ganjam district (Plains)	...	{ Urban ... Rural ... Total ...	57,822 1,300,333 1,358,155	101 2,035 2,136	86 2,076 2,162	95 2,281 2,376	97 2,233 2,330	115 2,212 2,327
8	Agency Districts	...	{ Ganjam ... Koraput ...	85,188 19,610	93 14	107 14	112 15	137 21	131 9
	Total of Agency Districts			104,798	107	121	127	158	140
	Total for the province	...	{ Urban ... Rural ... Total ...	216,806 6,736,954 6,953,760	355 13,668 14,023	306 14,192 14,498	337 15,523 15,860	283 13,599 13,882	310 12,646 12,956
	Ratio per 1,000 of population.		{ Urban ... Rural ... Total ...	... ... ...	1·6 2·0 2·0	1·4 2·1 2·1	1·6 2·3 2·3	1·3 2·0 2·0	1·4 1·9 1·9



DIX I—*contd.*

*Orissa province during each month of the year 1936.*

4							5	
June.	July.	August.	September.	October.	November.	December.	Total deaths registered during the year.	No.
85	109	121	116	96	132	103	1,160	}
4,004	5,065	5,100	5,218	5,204	7,368	10,924	65,055	
4,089	5,174	5,221	5,334	5,300	7,500	11,027	66,215	
26	27	31	29	32	35	37	354	}
2,493	2,310	2,795	2,429	2,436	3,365	4,044	31,765	
2,519	2,337	2,826	2,458	2,468	3,400	4,081	32,119	
121	165	111	108	128	154	166	1,416	}
2,051	2,529	2,462	2,002	1,834	2,128	3,319	27,220	
2,172	2,694	2,573	2,110	1,962	2,282	3,485	28,636	
73	47	51	34	29	28	28	407	}
2,449	2,417	2,604	2,167	1,789	2,027	3,427	27,219	
2,522	2,464	2,655	2,201	1,818	2,055	3,473	27,626	
254	366	335	289	221	185	387	3,584	}
254	366	335	289	221	185	387	3,584	
179	250	226	237	183	205	237	2,809	}
179	250	226	237	183	205	237	2,809	
79	133	137	113	118	84	115	1,273	}
2,392	3,207	3,182	2,599	2,177	2,173	3,091	29,658	
2,471	3,340	3,319	2,712	2,295	2,257	3,206	30,931	
129	130	146	154	103	104	114	1,460	}
5	12	34	37	12	17	18	208	
134	142	180	191	115	121	132	1,668	}
384	481	451	400	403	433	467	4,610	
13,956	16,286	16,884	15,132	13,959	17,572	25,561	188,978	
14,340	16,767	17,335	15,532	14,362	18,005	26,028	193,588	}
1·8	2·2	2·1	1·8	1·9	2·0	2·2	21·8	
2·1	2·4	2·5	2·2	2·1	2·6	3·8	28·1	
2·1	2·4	2·5	2·2	2·1	2·6	3·7	27·8	

## ANNUAL FORM No. IV.—Deaths registered according to age in the

1	2										
No.	District.			Deaths under							
				Not exceeding one month.						Total of columns 3 and 6.	
				Male.			Female.				
				Under one week.	Over one week.	Total.	Under one week.	Over one week.	Total.		
			1	2	3	4	5	6	7		
1	Cuttack district	...	Urban	...	35	11	46	38	23	61	107
			Rural	...	2,311	1,602	3,913	1,988	1,202	3,190	7,103
			Total	...	2,346	1,613	3,959	2,026	1,225	3,251	7,210
2	Balasore district	...	Urban	...	17	8	25	7	12	19	44
			Rural	...	1,262	801	2,063	1,093	668	1,761	3,824
			Total	...	1,279	809	2,088	1,100	680	1,780	3,868
3	Puri district	...	Urban	...	44	23	67	41	26	67	134
			Rural	...	1,083	832	1,915	883	666	1,549	3,464
			Total	...	1,127	855	1,982	924	692	1,616	3,598
4	Sambalpur district	...	Urban	...	7	2	9	14	7	21	30
			Rural	...	1,169	956	2,125	1,053	837	1,890	4,015
			Total	...	1,176	958	2,134	1,067	844	1,911	4,045
5	Angul district	...	Rural	...	103	101	204	75	92	167	371
			Total	...	103	101	204	75	92	167	371
6	Khondmal district	...	Rural	...	81	75	156	63	75	138	294
			Total	...	81	75	156	63	75	138	294
7	Ganjam district (Plans)	...	Urban	...	60	37	97	42	27	69	166
			Rural	...	1,628	1,099	2,727	1,173	1,030	2,203	4,930
			Total	...	1,688	1,136	2,824	1,215	1,057	2,272	5,096
AGENCY DISTRICTS.											
8	Ganjam	...	...	...	33	39	72	19	22	41	113
9	Koraput	...	...	...	1	...	1	1	...	1	2
10	Total of Agency Districts			...	34	39	73	20	22	42	115
11	Total for the province	...	Urban	...	163	81	244	142	95	237	481
			Rural	...	7,671	5,505	13,176	6,348	4,592	10,940	24,116
			Total	...	7,834	5,586	13,420	6,490	4,687	11,177	24,597



DIX I—contd.

districts of Orissa province during the year 1936.— contd.

8									
one year.									
Over one month and not exceeding six months.			Over six months and not exceeding twelve months.			Total males columns 8, 8 and 11.	Total females columns 6, 9 and 12.	Total.	No.
Male.	Female.	Total.	Male.	Female.	Total.				
8	9	10	11	12	13				
32	31	63	20	24	44	98	116	214	1
2,152	3,003	6,155	1,252	1,230	2,482	8,317	7,423	15,740	
3,184	3 034	6,218	1,272	1,254	2,526	8,415	7,539	15,954	
5	16	21	2	8	10	32	43	75	2
1,434	1,397	2,831	411	504	915	3,908	3,662	7,570	
1,439	1,418	2,852	413	512	925	3,940	3,705	7,645	
47	42	89	16	19	35	130	128	258	3
1,252	1,141	2,393	640	601	1,241	3,807	3,291	7,098	
1,299	1,183	2,482	656	620	1,276	3,937	3,419	7,356	
12	8	20	6	6	12	27	35	62	4
965	817	1,782	480	426	906	3,570	3,133	6,703	
977	825	1,802	486	432	918	3,597	3,168	6,765	
166	159	325	92	95	187	462	421	883	5
166	159	325	92	95	187	462	421	883	
167	163	330	73	83	156	396	384	780	6
167	163	330	73	83	156	396	384	780	
68	45	113	51	44	95	216	158	374	7
1,693	1,350	3,043	1,297	1,270	2,567	5,717	4,823	10,540	
1,761	1,395	3,156	1,348	1,314	2,662	5,933	4,981	10,914	
65	61	126	51	51	102	188	153	341	8
4	3	7	2	2	4	7	6	13	9
69	64	133	53	53	106	195	159	354	10
164	142	306	95	101	196	503	480	983	11
8,898	8,094	16,992	4,296	4,262	8,560	26,372	23,296	49,668	
9,062	8,286	17,298	4,393	4,363	8,756	26,875	23,776	50,651	

ANNUAL FORM NO. IV—Deaths registered according to age in the

1	2		3		4		5		6	
No.	Districts.		1 year and under 5 years.		5 years and under 10 years.		10 years and under 15 years.		15 years and under 20 years.	
			Male.	Female.	Male.	Female.	Male.	Female.	Male.	Female.
			17	18	19	20	21	22	23	24
1	Cuttack district	{ Urban ... Rural .. Total ..	52 5,016 5,068	46 5,298 5,344	18 1,620 1,638	16 1,457 1,473	25 893 918	17 778 795	27 938 965	35 1,491 1,526
2	Balasore district	{ Urban ... Rural ... Total ...	15 1,747 1,762	4 1,911 1,915	5 694 699	7 656 663	11 394 405	5 383 388	4 500 504	10 744 754
3	Puri district	{ Urban ... Rural ... Total ...	49 2,082 2,131	49 2,347 2,396	20 497 517	24 503 527	14 264 278	13 243 261	24 281 305	11 491 502
4	Sambalpur district	{ Urban ... Rural ... Total ...	47 2,156 2,203	28 2,124 2,152	8 1,048 1,056	11 978 989	11 546 557	14 450 464	12 535 547	12 578 590
5	Angul district	{ Rural ... Total ...	374 374	356 356	155 155	121 121	61 61	47 47	58 58	52 52
6	Khondmals district	{ Rural ... Total ...	223 223	267 267	42 42	54 54	20 20	17 17	42 42	24 24
7	Ganjam district (Plains)	{ Urban ... Rural ... Total ...	80 2,151 2,231	63 2,186 2,249	20 596 616	7 617 624	13 375 388	14 343 357	14 331 345	22 466 488
AGENCY DISTRICTS.										
8	Ganjam	...	107	88	32	28	23	19	22	27
9	Koraput	...	14	11	1	5	3	1	5	4
10	Total of Agency districts	...	121	99	33	33	26	20	27	31
11	Total for the province	{ Urban ...	243	190	71	65	74	63	81	90
		{ Rural ...	13,870	14,588	4,685	4,419	2,579	2,286	2,712	3,877
		{ Total ...	14,113	14,778	4,756	4,484	2,653	2,349	2,793	3,967



DIX I—contd.

districts of Orissa province, during the year 1936—concl'd.

7		8		9		10		11		12
20 years and under 30 years.		30 years and under 40 years.		40 years and under 50 years.		50 years and under 60 years.		60 years and upwords.		No.
Male.	Female.	Male.	Female.	Male.	Female.	Male.	Female.	Male.	Female.	
25	26	27	28	29	30	31	32	33	34	
86	90	81	72	76	34	73	49	81	68	1
2,579	4,010	2,708	2,952	2,407	2,281	2,987	3,090	3,828	4,982	
2,665	4,100	2,789	3,024	2,488	2,315	3,060	3,139	3,909	5,050	
22	31	19	25	26	13	20	14	20	28	2
1,510	2,525	1,620	1,955	1,623	1,446	1,607	1,577	1,495	1,808	
1,532	2,556	1,639	1,980	1,649	1,459	1,627	1,591	1,515	1,836	
48	56	88	59	93	56	128	54	165	207	3
961	1,530	968	1,140	1,153	907	1,432	1,410	1,840	2,068	
1,009	1,586	1,056	1,199	1,246	963	1,560	1,464	2,005	2,275	
22	27	22	16	21	13	14	22	25	10	4
1,120	1,224	1,264	1,018	1,140	843	1,190	1,042	1,601	1,659	
1,142	1,251	1,286	1,034	1,161	856	1,204	1,064	1,626	1,679	
116	142	157	138	100	100	158	164	203	199	5
116	142	157	138	100	100	158	164	203	199	
105	114	151	152	141	126	123	151	114	163	6
105	114	151	152	141	126	123	151	114	163	
62	48	53	32	63	24	67	34	140	143	7
767	1,017	811	847	1,003	825	1,232	1,190	1,949	2,412	
829	1,065	864	879	1,066	849	1,299	1,224	2,089	2,555	
46	71	72	70	90	59	90	79	99	97	8
12	17	12	7	10	9	23	8	25	28	3
58	88	84	77	100	68	113	87	124	125	10
240	252	268	204	279	140	302	173	431	466	11
7,216	10,650	7,763	8,279	7,667	6,596	8,842	8,711	11,154	13,416	
7,456	10,902	8,021	8,483	7,946	6,736	9,144	8,884	11,585	13,882	

## ANNUAL FORM NO. IV-A—Deaths under one year registered according to class in each town and

1		2			3		
Registering circle.		Christians.			Hindus.		
		Male.	Female.	Total.	Male.	Female.	Total.
CUTTACK.							
Cuttack town	...	2	3	5	30	44	74
Kendrapara town	...	...	...	...	41	47	88
Jajpur town	...	...	...	...	9	8	17
Total of towns	...	2	3	5	80	99	179
Total of rural	..	...	...	...	8,168	7,303	15,471
Total of district	...	2	3	5	8,248	7,402	15,650
BALASORE.							
Balasore town	...	...	...	...	31	36	67
Total of rural	...	...	2	2	3,819	3,566	7,385
Total of district	...	...	2	2	3,850	3,602	7,452
PURI.							
Puri town	...	...	...	...	130	128	258
Total of rural	...	...	...	...	3,738	3,244	6,982
Total of district	...	...	...	...	3,868	3,372	7,240
ANGUL.							
Total of rural	...	...	1	1	461	419	880
Total of district	...	...	1	1	461	419	880
SAMBALPUR.							
Sambalpur town	...	...	...	...	27	35	62
Total of rural	...	...	...	...	3,551	3,115	6,666
Total of district	...	...	...	...	3,578	3,150	6,728



DIX I—contd.

rural areas in the districts of Orissa Province during the year 1936—contd.

4			5			6			7		
Muhammadans.			Buddhists.			Other classes.			Total.		
Male.	Female.	Total.	Male.	Female.	Total.	Male.	Female.	Total.	Male.	Female.	Total.
7	5	12	...	...	...	...	...	...	39	52	91
6	7	13	...	...	...	...	...	...	47	54	101
3	2	5	...	...	...	...	...	...	12	10	22
16	14	30	...	...	...	...	...	...	98	116	214
149	120	269	...	...	...	...	...	...	8,317	7,423	15,740
165	134	299	...	...	...	...	...	...	8,415	7,539	15,954
1	5	6	...	...	...	...	2	2	32	43	75
76	81	157	...	...	...	13	13	26	3,908	3,662	7,570
77	86	163	...	...	...	13	15	28	3,940	3,705	7,645
...	...	...	...	...	...	...	...	...	130	128	258
69	47	116	...	...	...	...	...	...	3,807	3,291	7,098
69	47	116	...	...	...	...	...	...	3,937	3,419	7,356
1	1	2	...	...	...	...	...	...	462	421	883
1	1	2	...	...	...	...	...	...	462	421	883
...	...	...	...	...	...	...	...	...	27	35	62
2	2	4	...	...	...	17	16	33	3,570	3,133	6,703
2	2	4	...	...	...	17	16	33	3,597	3,168	6,765

ANNUAL FORM No. IV-A.—Deaths under one year registered according to class in each town and

1		2			3			
Registering circle.		Christians.			Hindus.			
		Male.	Female.	Total.	Male.	Female.	Total.	
KHONDMALS.								
Total of rural	...	...	...	...	136	149	285	
Total of district	...	...	...	...	136	149	285	
GANJAM PLAINS.								
Berhampur town	...	...	...	1	152	114	266	
Parlakimedi town	...	...	...	...	55	44	99	
Total of towns	...	1	...	1	207	158	365	
Total of rural	...	...	...	...	5,712	4,823	10,535	
Total of district	...	1	...	1	5,919	4,981	10,900	
AGENCY DISTRICTS.								
Ganjam	...	...	...	...	188	153	341	
Koraput	...	...	...	...	7	6	13	
Total of Agency Districts	...	...	...	...	195	159	354	
PROVINCE.								
Total for the province.	{ Towns	...	3	3	6	475	456	931
	{ Rrural	...	...	3	3	25,780	22,778	48,558
	{ Districts	...	3	6	9	26,255	23,234	49,489



DIX I---contd.

rural areas in the districts of Orissa Province during the year 1936---concl'd.

4			5			6			7		
Muhammadans.			Buddhists.			Other classes.			Total.		
Male.	Female.	Total.	Male.	Female.	Total.	Male.	Female.	Total.	Male.	Female.	Total.
...	...	...	...	...	...	260	235	495	396	384	780
...	...	...	...	...	...	260	235	495	396	384	780
6	...	6	...	...	...	...	...	...	159	114	273
2	...	2	...	...	...	...	...	...	57	44	101
8	...	8	...	...	...	...	...	...	216	158	374
2	...	2	...	...	...	3	...	3	5,717	4,823	10,540
10	...	10	...	...	...	3	...	3	5,933	4,981	10,914
...	...	...	...	...	...	...	...	...	188	153	341
...	...	...	...	...	...	...	...	...	7	6	13
...	...	...	...	...	...	...	...	...	195	159	354
25	19	44	...	...	...	...	2	2	503	480	983
299	251	550	...	...	...	293	264	557	26,372	23,296	49,668
324	270	594	...	...	...	293	266	559	26,875	23,776	50,651

## ANNUAL FORM NO. V.—Deaths registered according to

1	2	3											
No.	District.	Number of deaths											
		Christians.			Hindus.			Muhammadans.			Buddhists.		
		Male.	Female.	Total.	Male.	Female.	Total.	Male.	Female.	Total.	Male.	Female.	Total.
1	Cuttack ...	7	7	14	31,100	33,433	64,533	803	865	1,668	...	...	...
2	Balasore ...	9	12	21	14,666	16,259	30,925	391	415	806	...	...	...
3	Puri ...	8	4	12	13,740	14,358	28,098	296	230	526	...	...	...
4	Sambalpur ...	14	10	24	14,235	13,135	27,370	37	37	74	...	...	...
5	Angul ...	1	1	2	1,841	1,737	3,578	2	2	4	...	...	...
6	Khondmals ...	...	...	...	410	445	855	...	...	...	...	...	...
7	Ganjam Plains ...	52	60	112	15,429	15,043	30,472	93	78	171	...	...	...
AGENCY DISTRICTS.													
8	Ganjam ...	7	7	14	742	662	1,404	2	1	3	...	...	...
9	Koraput ...	...	...	...	106	93	199	...	...	...	...	...	...
Total of Agency Districts		7	7	14	848	755	1,603	2	1	3	...	...	...
Total for the province		98	101	199	92,269	95,165	187,434	1,624	1,628	3,252	...	...	...



DIX I—contd.

class in the districts of Orissa Province during the year 1936.

			4															
registered.			Ratio of deaths per 1,000 of population.															
Other classes.			Christians.			Hindus.			Muhammadans.			Buddhists.			Other classes.			No.
Male.	Female.	Total.	Male.	Female.	Total.	Male.	Female.	Total.	Male.	Female.	Total.	Male.	Female.	Total.	Male.	Female.	Total.	
...	...	...	5·7	4·2	4·9	31·2	30·1	30·6	26·8	23·9	25·2	...	..	...	...	...	...	1
206	161	367	13·1	17·4	15·3	32·2	33·4	32·7	25·0	25·8	25·4	...	..	...	33·1	24·5	28·7	2
...	...	...	10·4	5·2	7·8	28·1	27·5	27·8	27·2	19·8	23·4	...	...	...	...	...	...	3
93	65	158	7·3	5·1	6·2	27·8	24·6	26·2	14·6	15·9	15·2	...	..	...	16·3	11·1	13·7	4
...	...	...	9·6	8·5	9·0	26·9	24·3	25·6	12·5	19·0	15·1	...	...	...	...	...	...	5
947	1,007	1,954	...	...	...	34·1	37·4	35·8	...	...	...	...	..	...	33·6	33·4	33·5	6
86	90	176	27·7	31·6	29·7	26·5	21·2	23·6	45·0	41·3	43·2	...	...	...	3·0	3·1	3·0	7
18	21	39	14·4	18·6	16·2	31·2	27·0	29·1	48·8	30·3	40·5	...	...	...	1·0	1·1	1·1	8
6	3	9	...	...	...	11·7	10·0	10·8	...	...	...	...	...	...	20·7	10·2	15·4	9
24	24	48	8·5	9·8	9·1	25·8	22·4	24·1	48·8	20·3	40·5	...	...	...	1·3	1·3	1·3	
1,356	1,347	2,703	13·2	12·9	13·0	29·3	27·3	28·3	26·5	23·9	25·1	...	...	...	15·5	14·8	15·1	

APPENDIX I.—*contd.*

ANNUAL FORM NO. VA—*Death rates according to class, urban and rural areas separately in each district of Orissa province during the year 1936.*

Number.	District.	Christians.	Hindus.	Muhammadians.	Buddhists.	Other classes.	Total.
1	2	3	4	5	6	7	8
1	Cuttack { Urban ...	5·8	13·8	10·6	...	...	13·1
	... { Rural ...	...	31·2	28·9	...	...	31·2
2	Balasore { Urban ...	10·3	20·6	18·0	...	22·7	19·8
	... { Rural ...	18·0	32·9	26·4	...	28·7	32·7
3	Puri { Urban ...	10·0	38·2	8·4	...	...	37·7
	... { Rural ...	7·5	27·4	23·7	...	...	27·3
4	Sambalpur { Urban ...	...	29·1	10·5	...	...	27·1
	... { Rural ...	6·6	26·1	16·7	...	13·7	25·9
5	Angul { Urban ...	...	...	...	...	...	...
	... { Rural ...	9·0	25·6	15·1	...	...	25·5
6	Khondmals { Urban ...	...	...	...	...	...	...
	... { Rural ...	...	35·8	...	...	33·5	34·1
7	Ganjam Plains { Urban ...	9·8	22·3	20·3	...	...	22·0
	... { Rural ...	34·3	23·6	58·5	...	3·0	22·8
AGENCY DISTRICTS.							
8	Ganjam Agency { Urban ...	...	...	...	...	...	...
	... { Rural ...	16·2	29·1	40·5	...	1·1	17·1
9	Koraput { Urban ...	...	...	...	...	...	...
	... { Rural ...	...	10·8	...	...	15·4	10·6
Total of Agency Districts.		...	...	...	...	...	...
	... { Rural ...	9·1	24·1	40·5	...	1·3	15·9
Total for the province		6·9	22·5	12·7	...	9·9	21·3
	... { Rural ...	15·2	28·4	27·4	...	15·1	28·1



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APPENDIX I

Annual Form No. VI.

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## ANNUAL FORM NO VI.—Deaths registered from different causes in the

1	2	3			4			5			6	7	8	9	10	11
No.	Districts and towns.	Population for which returns were received.			Births.			Birth-rates.			Cholera.	Small-pox.	Plague.	Feyers.	Dysentery and diarrhoea.	Respiratory diseases.
		Male.	Female.	Total.	Male.	Female.	Total.	Male.	Female.	Total.						
DISTRICTS EX-CLUDING TOWNS																
1	Cuttack ...	980,266	1,107,885	2,088,151	40,455	38,040	78,495	19'4	18'2	37'6	4,184	1,958	...	29,896	8,457	1,336
2	Bajasore ...	470,385	502,372	972,757	16,606	15,940	32,546	17'1	16'4	33'5	1,831	472	...	18,237	514	61
3	Puri ...	479,511	518,075	997,586	18,433	17,438	35,871	18'5	17'5	36'0	355	237	...	10,983	3,320	1,072
4	Sambalpur ...	514,424	536,169	1,050,593	19,391	18,383	37,774	18'5	17'5	36'0	1,194	646	...	14,093	1,382	1,238
5	Augul ...	68,694	71,764	140,458	2,947	2,917	5,864	21'0	20'7	1'47	220	12	...	2,761	33	7
6	Khondmals ...	40,231	42,047	82,278	1,503	1,399	2,902	18'3	17'0	35'3	...	103	...	2,344	5	6
7	Ganjam Plains ...	586,745	713,588	1,300,333	27,340	25,833	53,173	21'0	19'9	40'9	27	317	...	16,643	1,880	716
AGENCY DISTRICTS.																
8	Ganjam Agency ...	41,895	43,293	85,188	1,076	1,007	2,083	12'6	11'8	24'4	3	7	...	1,091	65	90
9	Koraput ...	9,670	9,940	19,610	184	174	358	9'4	8'9	18'3	...	...	...	100	17	19
	Total of Agency Districts	51,565	53,233	104,798	1,260	1,181	2,441	12'0	11'3	23'3	3	7	...	1,111	8	109
	Total for the province	3,191,821	3,545,133	6,736,954	127,935	121,131	249,066	19'0	18'0	37'0	7,814	3,752	...	96,148		4,545
TOWNS																
CUTTACK DISTRICT.																
10	Cuttack ...	36,357	28,906	65,263	434	400	834	6'7	6'1	12'8	25	3	...	146	80	35
11	Kendrapara ...	6,237	6,383	12,620	168	175	343	13'3	13'9	27'2	26	...	...	207	40	
12	Jajpur ...	5,274	5,399	10,673	127	132	259	11'9	12'4	24'3	3	1	...	71	16	7
BALASORE DISTRICT.																
13	Balasore ...	10,133	7,710	17,843	195	172	367	10'9	9'6	20'5	4	14	...	146	27	11
PURI DISTRICT.																
14	Puri ...	20,703	16,865	37,568	499	497	996	13'3	13'2	26'5	26	8	...	571	237	64
SAMBALPUR DISTRICT.																
15	Sambalpur ...	7,716	7,301	15,017	194	156	350	12'9	10'4	23'3	79	10	...	129	47	22
GANJAM DISTRICT.																
16	Berhampur ...	18,490	19,260	37,750	896	827	1,723	23'7	21'9	45'6	...	1	...	179	102	176
17	Parlakimedi ...	9,604	10,468	20,072	373	386	759	18'6	19'2	37'8	...	...	...	75	61	55
	Total of all towns	114,514	102,292	216,806	2,886	2,745	5,631	13'3	12'7	26'0	163	37	...	1,524	610	376
	Total for the whole province.	3,306,335	3,647,425	6,953,760	130,821	123,876	254,697	18'3	17'8	36'6	7,977	3,789	...	97,672	16,283	4,921



DIX I—contd.

districts and towns of Orissa province during the year 1936.

12						13	14			15													
Injuries.						All other causes	Total deaths from all causes.			Ratio of deaths per 1,000 of population.													
Suicide.		Wounds or accidents.	Snake-bite or killed by wild animals.	Rabies.	Total.		Male.	Female.	Total.	Cholera.	Small-pox.	Plague.	Fever.	Dysentery and diarrhoea.	Respiratory diseases.	Injuries.	All other causes.	From all causes.					
Male.	Female.																	Male.	Female.	Total.	Male.	Female.	Total.
	331	513	217	48	1,241	17,983	31,293	33,762	65,055	2'0	0'9	...	14'3	4'0	0'6	0'6	8'6	31'9	30'5	31'2	...	1	
	101	207	137	5	495	10,155	15,098	16,667	31,765	1'9	0'5	...	18'7	0'5	0'1	0'5	10'4	32'1	33'2	32'7	33'3	2	
28	86	252	95	1	462	10,791	13,285	13,935	27,220	0'4	0'2	...	11'0	3'3	1'1	0'5	10'8	27'7	26'9	27'3	29'9	3	
31	20	182	86	1	332	8,334	14,170	13,049	27,219	1'1	0'6	...	13'4	1'3	1'2	0'3	7'9	27'5	24'3	25'9	...	4	
9	8	36	44	...	97	454	1,844	1,740	3,584	1'6	0'09	...	19'7	0'2	0'05	0'7	3'2	26'8	24'2	25'5	...	5	
5	10	10	9	...	64	287	1,357	1,452	2,809	...	1'3	...	28'5	0'06	0'07	0'8	3'	33'7	34'5	...	...	6	
20	33	117	51	13	234	9,841	14,932	14,726	29,658	0'02	0'24	...	12'8	1'4	0'6	0'2	7'6	25'4	20'6	22'8	...	7	
	2	6	11	1	24	180	769	691	1,460	0'04	0'08	...	12'8	0'8	1'1	0'3	2'1	18'3	16'0	17'1	...	8	
1	1	4	1	...	7	65	112	96	208	...	...	...	5'1	0'9	1'0	0'4	3'3	11'6	9'6	10'6	...	9	
5	3	10	12	1	31	245	881	787	1,668	0'03	0'07	...	11'4	0'8	1'0	0'3	2'3	17'1	14'8	15'9	...		
275	592	1,327	681	81	2,956	58,090	92,860	96,118	188,978	1'2	0'6	...	14'3	2'3	0'7	0'4	8'6	29'1	27'1	28'1	...		
6	2	12	2	...	22	277	260	228	588	0'4	0'05	...	2'2	1'2	0'5	0'3	4'2	9'9	7'9	9'0	10'0	10	
...	2	2	1	...	5	161	208	240	448	2'1	...	...	16'4	3'2	0'5	0'4	13'0	...	37'6	35'5	30'3	11	
...	...	...	...	...	...	26	49	75	124	0'3	0'09	...	6'7	1'5	0'7	...	2'1	9'3	13'9	11'6	19'7	12	
2	1	10	...	...	13	139	174	189	354	0'2	0'8	...	8'2	1'5	0'6	0'7	7'8	17'2	23'3	19'8	21'4	13	
4	4	11	2	...	21	489	759	657	1,416	0'7	0'2	...	15'2	6'3	1'7	0'6	13'0	36'7	38'9	37'7	31'5	14	
1	...	3	1	...	5	115	209	198	407	5'3	0'7	...	8'6	3'1	1'5	0'3	7'7	27'1	27'1	27'1	21'7	15	
...	1	11	1	3	16	406	514	366	880	...	0'03	...	4'7	2'7	4'7	0'4	10'8	27'8	19'0	23'3	...	16	
...	...	3	2	1	6	196	214	179	393	...	...	...	3'7	3'0	2'7	0'3	9'8	22'3	17'1	19'6	...	17	
13	10	52	9	4	88	1,812	2,487	2,123	4,610	0'8	0'2	...	7'0	2'8	1'7	0'4	8'4	21'7	20'8	21'3	...		
438	692	1,379	690	85	3,044	59,902	95,347	98,241	193,588	1'1	0'5	...	14'0	2'3	0'7	0'4	8'6	28'8	26'9	27'8	...		

## ANNUAL FORM NO. VI (a).—Deaths registered from different kinds

Municipalities.	Malaria.	Enteric fever.	Measles.	Relapsing fever (spirochocetal).	Kala-azar.	Influenza.	Cerebro-spinal fever.	Typhus fever.	Blackwater fever.	Other fevers.	Dysentery.	Diarrhoea.
1	2	3	4	5	6	7	8	9	10	11	12	13
CUTTACK DISTRICT.												
Cuttack ...	146	...	...	...	...	...	...	...	...	...	50	30
Kendrapara ...	206	...	...	...	1	...	...	...	...	...	40	...
Jajpur —	71	...	...	...	...	...	...	...	...	...	12	4
BALASORE DISTRICT.												
Balasore ...	102	1	...	...	...	6	...	...	...	37	25	2
PURI DISTRICT.												
Puri —	...	...	...	...	...	...	...	...	...	571	236	1
SAMBALPUR DISTRICT.												
Sambalpur ...	129	...	...	...	...	...	...	...	...	...	47	...
GANJAM DISTRICT.												
Berhampur ...	8	15	...	...	...	29	...	...	...	127	42	60
Parlakimedi ...	17	11	...	...	...	...	...	...	1	46	34	27



DIX I—contd.

of fevers, dysentery, diarrhœa, respiratory diseases and other causes.

Pneumonia.	tuber- Pulmonary culosis.	Hooping-cough.	Other respiratory dis- eases.	Beri-Beri.	Acute poliomyelitis.	Diphtheria.	Chicken-pox.	Mumps.	Tuberculosis of joints.	Other tubercular dis- eases.	Leprosy.	Cancer.	Deaths from child-birth.	Deaths under one year.	Infantile mortality rate per 1,000 births.
14	15	19	17	18	19	20	21	22	23	24	25	26	27	28	29
...	...	...	35	...	...	...	2	...	...	...	...	...	...	91	109.1
...	...	...	6	...	...	...	1	...	...	...	...	...	7	101	294.5
...	...	...	7	...	...	...	2	...	...	...	...	...	...	22	84.9
21	...	...	11	...	...	...	1	...	...	...	...	...	...	75	204.4
16	...	...	64	...	...	...	...	...	...	25	38	...	9	258	259.0
...	...	...	22	...	...	...	...	...	...	...	...	...	6	62	177.1
64	...	...	91	1	...	...	...	...	...	21	6	2	19	273	158.4
23	7	...	25	4	...	...	...	...	...	...	1	1	4	101	133.1

## ANNUAL FROM NO. VII.—Deaths registered from cholera

1	2	3		4		5							
No.	District.	Circles of registration.		Villages.		January.	February.	March.	April.	May.	June.	July.	
		Number in each district.	Number from which deaths from cholera were reported.	Number in each district.	Number from which deaths from cholera were reported.								
1	Cuttack	...	13	13	5,506	851	112	75	165	170	187	208	191
2	Balasore	...	10	10	3,479	349	12	37	39	310	630	273	54
	Puri	...	6	6	2,987	171	4	40	54	32	24	49	27
4	Sambalpur	...	27	27	3,094	281	...	16	27	27	319	411	304
5	Angul	...	5	5	467	73	...	12	77	...	13	26	45
6	Khondmals	...	4	...	1,141	...	...	...	...	...	...	...	...
7	Ganjam Plains	...	9	6	2,658	12	...	1	2	...	12	4	6
AGENCY DISTRICTS.													
8	Ganjam Agency	...	1	1	100	2	...	...	...	...	1	...	...
9	Koraput	...	3	...	3	...	...	...	...	...	...	...	...
Total of Agency Districts													
			4	1	103	2	...	...	...	...	1	...	...
Total for the province													
			78	68	19,435	1,689	128	181	364	539	1,186	1	627



DIX I—*contd.*

*in the districts of Orissa Province during each month of the year 1936.*

					6			7			8	1
August.	September.	October.	November.	December.	Total.			Ratio of deaths per 1,000 of population.			Mean ratio per 1,000 of previous five years.	
					Male.	Female.	Total.	Male.	Female.	Total.		
848	260	213	898	1,416	2,015	2,228	4,238	2·0	1·9	1·9	2·3	1
48	61	64	179	128	886	949	1,835	1·8	1·9	1·9	1·9	2
14	34	21	27	55	190	191	381	0·4	0·4	0·4	1·1	3
158	11	...	...	...	643	630	1,273	1·2	1·2	1·2	...	4
34	5	6	...	2	139	81	220	2·0	1·1	1·6	...	5
...	...	...	...	...	...	...	...	...	...	...	...	6
1	1	...	...	...	16	11	27	0·0	0·01	00·2	...	7
...	...	2	...	...	1	2	3	0·02	0·05	0·04	...	8
...	...	...	...	...	...	...	—	...	...	...	...	9
...	...	2	...	...	1	2	3	00·2	0·04	0·03	...	
598	372	306	1,104	1,601	3,890	4,087	7,977	1·2	1·1	1·1	...	

ANNUAL FORM NO. VIII.—Deaths registered from small-pox in the districts

1	2	3		4		5					
No.	District.	Circles of registration.		Villages.		January.	February.	March.	April.	May.	June.
		Number in each district.	Number from which deaths from small-pox were reported.	Number in each district.	Number from which deaths from small-pox were reported.						
	ORISSA.										
1	Cuttack ...	13	13	5,506	718	222	258	282	258	188	151
2	Balasore ...	10	10	3,479	338	36	45	53	89	47	92
3	Puri ...	6	6	2,987	194	23	34	39	31	37	28
4	Sambalpur ...	27	27	3,094	193	68	69	77	108	114	109
5	Angul ...	5	5	467	12	5	4	3	...	...	...
6	Khondmals ...	4	3	1,141	100	...	...	...	5	27	9
7	Ganjam Plains ...	9	8	2,658	58	9	50	25	20	58	28
	AGENCY DISTRICTS.										
8	Ganjam Agency ...	1	1	100	4	...	...	...	2	4	...
9	Koraput ...	3	...	3	...	...	...	...	...	...	...
	Total of Agency Districts.	4	1	103	4	...	...	...	2	4	...
	Total for the province	78	73	19,435	1,617	363	460	479	513	475	417



DIX I—contd.

of Orissa Province during each month of the year 1936.

						6			7		8			9	10
July.	August.	September.	October.	November.	December.	Total.			Number of deaths among children—		Ratio of deaths per 1,000 of population.			Mean ratio per 1,000 of previous five years.	No.
						Male.	Female.	Total.	Under 1 year.	One year and under 10 years.	Male.	Female.	Total.		
167	115	56	48	70	147	1,013	949	1,962	35	187	1·0	0·8	0·9	1·6	1
43	45	12	13	3	8	252	234	486	57	50	0·5	0·5	0·5	0·5	2
26	11	5	3	5	3	139	106	245	41	82	0·3	0·2	0·2	1·9	3
67	29	9	...	...	6	345	311	656	33	37	0·7	0·6	0·6	...	4
...	...	...	...	...	...	1	11	12	...	1	0·02	0·15	0·09	...	5
27	2	6	10	13	4	55	48	103	1	...	1·4	1·1	1·3	...	6
29	22	8	18	21	30	136	182	318	77	69	0·2	0·2	0·2	...	7
...	...	...	...	...	1	5	2	7	3	1	0·12	0·05	0·08	...	8
...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	9
...	...	...	...	...	1	5	2	7	3	1	0·1	0·04	0·07	...	
359	224	96	92	112	199	1,946	1,843	3,789	247	427	0·6	0·5	0·5	...	

## ANNUAL FORM NO. IX.—Deaths registered from fevers in the districts

1	2	3	4	5									
No.	District.	Circles of registration.		Villages.		January.	February.	March.	April.	May.	June.	July.	
		Number in each district.	Number from which deaths from fevers were reported.	Number in each district.	Number from which fever deaths from were reported.								
1	Cuttack	13	13	5,506	4,579	2,034	2,057	2,599	1,971	1,538	1,527	1,991	
2	Balasore	10	10	3,479	3,284	1,496	1,593	1,648	1,268	833	1,234	1,343	
3	Puri	6	6	2,987	2,905	833	955	956	920	752	669	896	
4	Sambalpur	27	27	3,094	2,288	981	991	1,083	1,123	1,057	913	976	
5	Angul	5	5	467	328	262	243	301	201	187	176	242	
6	Khondmals	4	4	1,141	670	216	212	235	210	211	139	194	
7	Ganjam Plains	9	9	2,658	2,058	1,265	1,275	1,354	1,285	1,079	1,286	1,681	
AGENCY DISTRICTS.													
8	Ganjam Agency	1	1	100	92	73	80	77	114	101	101	84	
9	Koraput	3	3	3	3	9	7	8	11	3	3	4	
Total of Agency Districts		4	4	103	95	82	87	85	125	104	104	88	
Total for the province		78	78	19,435	16,207	7,169	7,413	8,261	7,103	5,761	6,048	7,411	



DIX I—contd.

of Orissa Province during each month of the year 1936.

					6			7			8	1
August.	September.	October.	November.	December.	Total.			Ratio of deaths per 1,000 of population.			Mean ratio per 1,000 of previous five years.	No.
					Male.	Female.	Total.	Male.	Female.	Total.		
2,196	2,537	2,795	3,698	5,377	14,135	16,185	30,320	13·7	14·1	13·9	13·5	1
1,688	1,451	1,465	1,999	2,365	8,802	9,581	18,383	18·3	18·8	18·6	18·7	2
1,052	943	878	1,046	1,654	5,333	6,218	11,554	10·7	11·6	11·2	9·6	3
1,309	1,188	989	1,247	2,365	7,214	7,008	14,222	13·8	12·9	13·3	...	4
240	225	183	161	340	1,383	1,378	2,761	20·1	19·2	19·7	...	5
190	199	151	174	213	1,107	1,237	2,344	27·5	29·4	28·5	...	6
1,786	1,460	1,228	1,267	1,931	8,338	8,559	16,897	13·6	11·5	12·4	...	7
104	125	71	80	81	593	498	1,091	14·2	11·5	12·8	...	8
14	12	7	8	14	55	45	100	5·7	4·5	5·1	...	9
118	137	78	88	95	648	543	1,191	12·6	10·2	11·4	...	
8,579	8,140	7,767	9,680	14,340	46,963	50,709	97,672	14·2	13·9	14·0	...	

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APPENDIX

ANNUAL FORM NO. X.—Deaths registered from dysentery and diarrhœa in the districts

1	2	3	4	5
No.	District.	Circles of registration.	Villages.	
		Number in each district.	Number from which deaths from dysentery and diarrhœa were reported.	Number in each district.
				Number from which deaths from dysentery and diarrhœa were reported.
				January.
				February.
				March.
				April.
				May.
				June.
				July.
1	Cuttack	13	13	5,506
2	Balasore	10	10	3,479
3	Puri	6	6	2,987
4	Sambalpur	27	27	3,094
5	Angul	5	5	467
6	Khondmals	4	2	1,141
7	Ganjam Plains	9	9	2,658
AGENCY DISTRICTS.				
8	Ganjam Agency	1	1	100
9	Koraput	3	3	3
Total of Agency Districts				
Total for the province				



DIX I—contd.

of Orissa Province during each month of the year 1936.

					6			7			8	1
August.	September.	October.	November.	December.	Total.			Ratio of deaths per 1,000 of population.			Mean ratio per 1,000 of previous five years.	No.
					Male.	Female.	Total.	Male.	Female.	Total.		
845	760	702	854	1,120	4,329	4,264	8,593	4.2	3.7	3.9	4.4	1
49	45	50	46	43	299	242	541	0.6	0.5	0.5	0.6	2
367	294	226	246	343	1,827	1,730	3,557	3.7	3.2	3.4	3.9	3
178	143	94	71	113	797	632	1,429	1.5	1.2	1.3	...	4
4	5	...	...	1	20	13	33	0.3	0.2	0.2	...	5
...	...	1	2	...	1	4	5	0.02	0.10	0.06	...	6
239	172	125	120	162	1,132	911	2,043	1.8	1.2	1.5	...	7
8	4	2	11	2	33	32	65	0.8	0.7	0.8	...	8
5	2	...	2	3	12	5	17	1.2	0.5	0.9	...	9
13	6	2	13	5	45	37	82	0.9	0.7	0.8	...	
1,695	1,425	1,200	1,352	1,787	8,450	7,833	16,283	2.6	2.1	2.3	...	

ANNUAL FORM NO. XI.—Deaths registered from respiratory diseases in the

1	2	3	4	5									
No.	District.	Circles of registration.		Villages.		January.	February.	March.	April.	May.	June.	July.	
		Number in each district.	Number from which deaths from respiratory diseases were reported.	Number in each district.	Number from which deaths from respiratory diseases were reported.								
1	Cuttack	...	13	13	5,506	920	114	130	136	96	86	134	130
2	Balasore	...	10	10	3,479	64	3	8	16	4	8	4	5
3	Puri	...	6	6	2,987	695	114	97	100	99	78	87	94
4	Sambalpur	...	27	27	3,094	652	102	103	115	114	106	115	109
5	Angul	...	5	5	467	7	...	1	3	...	...	...	...
6	Khondmals	...	4	3	1,141	3	1	1	1	...	...	1	...
7	Ganjam Plains	...	9	9	2,658	98	73	70	76	69	66	41	93
AGENCY DISTRICTS.													
8	Ganjam Agency	...	1	1	100	34	8	12	6	8	2	...	11
9	Koraput	...	3	2	3	2	1	...	4	6	1	...	4
Total of Agency Districts		...	4	3	103	36	9	12	10	14	3	...	15
Tctal for the province		...	78	76	19,435	2,475	416	427	457	396	347	382	446



DIX I.—contd.

districts of Orissa Province during each month of the year 1936.

					6			7			8	1
August.	September.	October.	November.	December.	Total.			Ratio of deaths per 1,000 of population.			Mean ratio per 1,000 of previous five years.	No.
					Male.	Female.	Total.	Male.	Female.	Total.		
106	117	107	90	138	768	616	1,384	0·7	0·5	0·6	0·6	1
7	3	5	3	6	52	20	72	0·1	0·04	0·1	0·08	2
93	76	79	97	122	586	550	1,136	1·2	1·0	1·1	1·2	3
108	115	89	100	79	811	449	1,260	1·6	0·8	1·2	...	4
2	...	1	...	...	3	4	7	0·04	0·06	0·05	...	5
...	...	2	...	...	3	3	6	0·07	0·07	0·07	...	6
122	87	91	60	99	535	412	947	0·9	0·6	0·7	...	7
13	4	7	3	16	41	49	90	1·0	1·1	1·1	...	8
1	1	...	...	...	11	8	19	1·1	0·8	1·0	...	
14	5	7	4	16	52	57	109	1·0	1·1	1·0	...	
452	403	381	354	460	2,810	2,111	4,921	0·8	0·6	0·7	...	





DIX I—*concl'd.*

*districts of Orissa Province during each month of the year 1936.*

[illegible]

APPENDIX II.

PROVINCIAL.

Statement showing details of registration in areas in which it is compulsory.

Compulsory registration area.	Population according to census of 1931.	Probable number of births at the rate of 286 per 1,000 married women between the ages of 15 and 40.	Actual number of births registered during the year.	Probable birth-rate per mille (columns 2 and 3).	Registered birth-rate per mille during the year.	Number of deaths registered during the year.		Death-rate per mille.		Number of persons prosecuted under Act IV (B. C.) of 1873.	Number of persons convicted.
						Including deaths in dispensary.	Excluding deaths in dispensary.	Including deaths in dispensary.	Excluding deaths in dispensary.		
1	2	3	4	5	6	7	8	9	10	11	12
Cuttack	65,263	Not available.	834	Not available.	12'8	869	588	13'3	9'0	...	...
Kendrapara	12,620		343		27'2	468	448	37'1	35'5	...	...
Jajpur	10,673		259		24'3	136	124	12'7	11'6	...	...
Balasore	17,843		367		20'5	413	354	23'1	19'8	...	...
Puri	37,568		996		26'5	1,661	1,416	44'2	37'7	14	7
Sambalpur	15,017		350		23'5	486	407	32'4	27'1	2	...
Berhampur	37,750		1,723		45'6	966	880	25'6	23'3	19	10
Parlakemidi	20,072		759		37'8	421	393	21'0	19'6	5	1
Total	2,16,806	...	5,631	...	26'0	5,420	4,610	24'9	21'3	40	18



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APPENDIX III.

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## DIX -- III.

*Orissa province during the year 1936.*

[illegible]

## APPENDIX IV.

*Table showing maternity and child welfare centres, health visitors and trained midwives in rural and urban areas in Orissa during 1936.*

District.	Maternity and child welfare.												Remarks.
	Centres maintained by—						Trained visitors.	Trained mid-wives.	Trained dais.				
	Government.		Local and municipal bodies.		Other agencies.								
	Rural.	Urban.	Rural.	Urban.	Rural.	Urban.	Rural.	Urban.	Rural.	Urban.	Rural.	Urban.	
1	2	3	4	5	6	7	8	9	10	11	12	13	14
Cuttack	...	...	...	1	...	...	...	1	...	...	5	10	
Balasore	...	...	...	1	...	...	...	1	...	4	...	...	
Puri	...	...	1	1	...	...	...	...	1	1	...	...	
Sambalpur	...	...	...	1	...	...	...	...	...	1	2	2	
Ganjam	...	...	1	1	...	1	...	1	3	12	1	1	
Koraput	...	...	...	...	...	...	...	...	8	...	1	...	
Total.	...	...	2	5	...	1	...	3	12	18	9	13	



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STATEMENT No. I.

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STATEMENT NO. I.—*Showing particulars of Vaccination in the*

Number.	District.		Population of district according to the census of 1931.	Average number of vaccinators employed throughout the season.	Total number of persons vaccinated.			Average number of persons vaccinated by each vaccinator.	Primary
					Male.	Female.	Total.		Total.
1	2		3	4	5	6	7	8	9
1	Cuttack	... { District excluding towns ... } ... { Towns ... }	2,176,707	{ 40 5	43,219 6,538	27,235 2,297	70,454 8,835	1,761 1,767	43,867 2,858
2	Balasore	... { District excluding towns ... } ... { Towns ... }	990,600	{ 23 2	27,928 986	19,054 492	46,982 1,478	2,043 739	22,562 329
3	Puri	... { District excluding towns ... } ... { Towns ... }	1,035,154	{ 35 2	30,403 3,194	18,496 1,463	48,899 4,657	1,397 2,328	36,310 1,356
4	Sambalpur	... { District excluding towns ... } ... { Towns ... }	1,065,610	{ 53 1	98,619 2,528	47,773 1,845	146,392 4,373	2,762 4,373	23,488 453
5	Angul	...	140,458	7	2,728	2,557	5,285	755	4,905
6	Khondmals	...	82,278	3	6,183	5,418	11,601	3,867	2,559
7	Ganjam	... { District excluding towns ... } ... { Towns ... }	1,535,873	{ 36 2	94,379 3,677	79,729 2,931	174,108 6,608	4,836 3,304	51,668 1,601
8	Koraput	...	963,617	25	34,756	32,950	67,706	2,708	34,129
Total of Vaccine Department.		{ Districts excluding towns ... } ... { Towns ... } ... { Total ... }	7,990,297	{ 222 12 234	338,215 16,923 355,138	233,212 9,028 242,240	571,427 25,951 597,378	2,574 2,162 2,553	219,488 6,597 226,085
		Jails	...	...	5,102	256	5,358	...	70
		Cooly Depot	...	...	147	123	270	...	10
GRAND TOTAL		...	...	...	360,387	242,619	603,006	...	226,165



*districts of Orissa during the year 1936-37.*

Vaccination.				Re-vaccination.			Percentage of successful cases in which the results were known.		Persons successfully vaccinated per 1,000 of population.	Total cost of Vaccination Department.	Number of all successful vaccinations and re-vaccinations performed by the vaccination staff only.	Average cost of each successful cases performed by the vaccination staff.
Successful.				Total.	Successful.	Unknown.						
Under one year.	One year and under six years.	Total of all ages.	Unknown.				Primary.	Revaccination.				
10	11	12	13	14	15	16	17	18	19	20	21	22
17,130	23,177	42,296	1,360	26,587	1,623	24,590	99°50	81°27	} 22°33	Rs. a. p. 1,917 13 9	48,606	Rs. a. p. 0 0 8
418	1,617	2,263	433	5,977	1,933	2,772	93°31	60°31				
2,957	17,328	21,777	754	24,420	16,962	4,434	99°86	84°87	} 39°92	402 4 0	39,542	0 0 2
176	150	327	2	1,149	316	833	100°00	100°00				
5 91	20,578	27,363	7,266	12,589	4,650	6,090	94°21	71°55	} 32°97	385 4 0	34,140	0 0 2
133	909	1,141	97	3,301	585	1,423	90°62	31°15				
17,786	4,783	23,257	181	122,904	68,762	48,435	99°78	92°33	} 88°94	6,010 6 0	94,779	0 1 0
123	306	452	...	3,920	1,747	1,359	99°78	68°22				
2,619	2,193	4,818	11	380	129	204	98°44	73°29	35°22	1,005 6 0	4,947	0 3 3
614	1,394	2,178	310	9,042	4,941	2,783	96°84	78°94	86°52	1,067 5 0	7,119	0 2 5
15,182	24,509	41,184	4,443	122,440	45,303	18,406	87°20	43°54	} 58°66	35,868 15 9	90,092	0 6 4
1,088	290	1,379	18	5,007	2,226	465	87°11	49°01				
7,026	19,039	28,645	2,620	33,577	14,953	5,636	90°91	53°52	45°56	23,108 10 9	43,898	0 8 5
65,905	113,001	191,518	16,945	351,939	157,323	110,578	94°56	65°18	} 45°45	69,766 1 3	363,123	0 3 1
1,938	3,272	5,562	550	19,354	6,807	6,852	91°98	54°45				
67,843	116,273	197,080	17,495	371,293	164,130	117,430	94°48	64°65				
2	...	68	1	5,288	1,845	580	98°55	39°19	...	...	...	...
...	...	...	10	260	...	260	...	...	...	...	...	...
67,845	116,273	197,148	17,506	376,841	165,975	118,270	94°48	64°19	45°45	69,766 1 3	363,123	0 3 1

SUMMARY.

	Total number of persons vaccinated.		Total number of operations performed.		Percentage of successful cases in which the results were known.		Average number of persons vaccinated by each vaccinator.		Number of children successfully vaccinated.		Ratio of successful vaccinations per 1,000 of population.	Total cost of Vaccination Department.	Average cost of each successful case.		
	Primary.	Re-vaccination.	Primary.	Re-vaccination.	Primary.	Re-vaccination.	Vaccinators employed.	Persons vaccinated by each vaccinator.	Under one year.	One and under 6 years.					
1	2	3	4	5	6	7	8	9	10	11	12	13	14		
												Rs.	a. p.	Rs. a. p.	
BY SPECIAL STAFF.															
Statement (I) ...	226,080	371,293	226,085	371,293	94'48	64'65	234	2,553	67,843	116,273	} 45'45				
BY OTHER AGENCIES.															
Jails and cooly depot ...	80	5,548	80	5,548	98'55	39'19	...	...	2	...			69,766	1 3 0 3 1	
Total ...	226,165	376,841	226,165	376,841	94'48	64'19	234	2,553	67,845	116,273	45'45	69,766	1 3 0 3 1		



*Comparative Statement no. II.—Showing the percentage of persons primarily vaccinated to the total number of vaccinations performed in the province of Orissa in each of the undermentioned official years.*

Establishments.	Years.									
	1927-28.	1928-29.	1929-30.	1930-31.	1931-32.	1932-33.	1933-34.	1934-35.	1935-36.	1936-37.
1	2	3	4	5	6	7	8	9	10	11
Government staff ...	73'10	62'02	73'52	55'04	83'90	88'53	69'08	44'57	47'84	48'89
Municipal ...	56'70	74'92	66'74	62'21	66'46	78'24	19'81	19'01	22'10	25'42
District Board ...	83'01	83'93	87'98	82'84	77'91	71'35	34'06	37'22	31'01	23'78
Licensed vaccinators ...	90'61	90'00	91'63	88'20	93'27	79'78	76'30	66'82	65'78	62'24
Jails ...	...	...	...	...	...	0'44	0'99	0'44	...	1'31
Cooly depot ...	...	...	...	...	...	...	...	8'12	...	3'70

## Statement No. III.—Showing particulars of vaccination

District.	Total number of persons vaccinated.		Total number inspected.								Percentage of	
			By Assistant Directors of Public Health or Superintendents of Vaccination.				By Native Superintendents or other Inspecting Officers.				By Assistant Directors of Public Health or of Vaccination.	
			Assistant Directors of Public Health.		Superintendent of Vaccination.		District Inspectors and Health Inspectors.		Sub-Inspectors.		Assistant Directors of Public Health.	
	Primary.	Revaccination.	Primary.	Revaccination.	Primary.	Revaccination.	Primary.	Revaccination.	Primary.	Revaccination.	Primary.	Revaccination.
1	2	3	4	5	6	7	8	9	10	11	12	13
Cuttack ...	46,731	34,637	...	...	840	612	4,891	1,296	...	...	...	...
Balasore ...	22,891	25,997	...	...	455	428	3,269	1,675	...	...	...	...
Puri ...	37,687	16,727	119	1	1,284	175	4,273	739	...	...	0'31	0'01
Sambalpur ...	23,984	128,174	...	...	1,451	7,035	2,314	10,327	4,151	11,121	...	...
Angul ...	4,915	640	...	...	...	...	2,061	...	...	...	...	...
Khondmals ...	2,559	9,042	...	...	...	...	...	...	1,115	6,231	...	...
Ganjam ...	53,269	127,447	249	4	2,080	1,604	35,871	61,369	...	...	0'47	0'003
Koraput ...	34,129	34,177	...	...	722	399	26,407	19,894	...	...	...	...
Total	226,165	376,841	368	5	6,832	10,253	79,086	95,300	5,266	17,352	0'16	0'001



verified by Inspecting Officers during the year 1936-37.

inspection to total number vaccinated.						Percentage of cases found successful to total number inspected.									
tors of Public Superintendent nation.		By Native Superintendents or other Inspecting Officers.				By Assistant Directors of Public Health or Superintendents of Vaccination.				By native Superintendents or other Inspecting Officers.				Percentage of successful cases reported by vaccinators.	
Superintendents of Vaccination.		District Inspectors and Health Inspectors.		Sub-Inspectors.		Assistant Direc- tors of Public Health.		Superintendents of Vaccination.		District Inspectors and Health Inspectors.		Sub-Inspec- tors			
Primary.	Revaccination.	Primary.	Revaccination.	Primary.	Revaccination.	Primary.	Revaccination.	Primary.	Revaccination.	Primary.	Revaccination.	Primary.	Revaccination.	Primary.	Revaccination.
14	15	16	17	18	19	20	21	22	23	24		26	27	28	29
1'79	1'77	10'46	3'74	...	...	...	...	92'14	55'23	92'97	62'04	...	...	99'13	57'13
1'99	1'65	14'28	6'44	...	...	...	...	89'45	30'37	98'50	85'67	...	...	99'86	84'12
3'41	1'04	11'36	4'41	...	...	100'00	100'00	98'91	26'86	83'52	41'94	...	...	90'76	62'14
6'05	5'49	9'66	8'14	17'34	8'76	...	...	98'82	88'55	95'46	90'87	86'08	92'62	99'78	90'82
...	...	42'01	...	...	...	...	...	...	...	93'9	...	...	...	98'22	33'94
...	...	...	...	43'56	68'91	...	...	...	...	...	...	84'30	61'29	96'84	78'94
3'90	1'26	67'34	48'15	...	...	96'39	50'00	89'13	40'59	87'34	38'98	...	...	87'20	43'77
2'12	1'17	77'37	58'21	...	...	...	...	68'56	30'57	77'28	59'83	...	...	90'91	61'98
3'02	2'72	34'97	25'29	2'33	4'60	97'55	60'00	91'25	73'32	84'99	49'80	85'70	81'37	94'48	64'19

STATEMENT NO. IV—*Showing side by side the ratios per mille of population of deaths  
the ten years*

District.		1927-28.		1928-29.		1929-30.		1930-31.	
		Ratio of deaths from small-pox.	Ratio of successful vaccination per mille of population.	Ratio of deaths from small-pox.	Ratio of successful vaccination per mille of population.	Ratio of deaths from small-pox.	Ratio of successful vaccination per mille of population.	Ratio of deaths from small-pox.	Ratio of successful vaccination per mille of population.
1		2	3	4	5	6	7	8	9
Cuttack	...	0·95	26·65	0·18	20·00	0·09	23·20	0·50	19·61
Balasore	...	1·42	28·22	0·43	36·65	0·09	44·98	0·29	40·12
Puri	...	0·47	48·59	0·08	39·80	0·02	44·86	0·06	45·27
Sambalpur	...	0·27	25·21	0·22	26·66	0·17	24·82	0·76	29·37
Angul	...	0·06	91·49	0·03	45·80	...	47·64	...	41·10
Khondmals	...	0·06	44·51	0·02	58·62	...	44·39	...	33·59
Ganjam	...	0·05	26·29	0·03	26·04	0·06	35·15	0·07	30·27
Koraput	...	0·01	36·35	0·06	29·62	0·26	24·25	0·23	30·44
Total	...	0·27	30·13	0·13	27·01	0·08	30·39	0·17	27·56



from small-pox and the ratios of successful vaccinations per mille of population during ending 1936-37.

1931-32.		1932-33.		1933-34.		1934-35.		1935-36.		1936-37.	
Ratio of deaths from small-pox.	Ratio of successful vaccination per mille of population.	Ratio of deaths from small-pox.	Ratio of successful vaccination per mille of population.	Ratio of deaths from small-pox.	Ratio of successful vaccination per mille of population.	Ratio of deaths from small-pox.	Ratio of successful vaccination per mille of population.	Ratio of deaths from small-pox.	Ratio of successful vaccination per mille of population.	Ratio of deaths from small-pox.	Ratio of successful vaccination per mille of population.
10	11	12	13	14	15	16	17	18	19	20	21
0·44	27·64	1·14	21·24	3·30	20·76	2·20	23·55	1·12	24·13	0·27	22·33
0·13	40·02	0·40	44·92	1·09	35·10	0·54	41·46	0·29	48·96	0·41	39·92
0·26	44·41	1·87	47·29	4·38	57·07	2·06	59·83	0·66	24·25	0·17	32·97
1·40	30·28	1·31	23·60	0·72	24·34	1·18	26·26	1·34	27·30	0·25	88·94
...	39·90	0·07	36·22	0·01	56·76	0·28	57·24	0·05	61·73	...	35·22
...	39·50	...	36·56	0·01	63·39	0·24	56·59	0·06	27·99	1·22	86·52
0·06	31·75	0·06	41·43	0·06	52·30	0·04	42·24	0·09	41·25	0·29	58·66
0·05	33·48	0·04	36·44	0·03	36·69	0·12	30·98	0·26	40·40	0·33	45·56
0·21	32·83	0·72	33·46	1·23	36·12	1·11	34·64	0·64	32·89	0·29	45·45

*STATEMENT No. V.—Showing the protection afforded to infants in each town in the province of Orissa during the year 1936-37.*

District.		Towns.	Number of births during the year ending 31st March 1937.	Number of deaths amongst infants under one year during the year ending 31st March 1937.	Number of successful vacci- nations amongst infants under one year during the year ending 31st March 1937.	Date of extension of Vaccination Act to town.	
1		2	3		5	6	
Cuttack	{	Cuttack	...	830	82	361	1st September 1884.
		Kendrapara	...	395	111	25	7th February 1888.
		Jajpur	...	242	25	32	Ditto.
		Total	...	1,467	218	418	
Balasore	...	Balasore	...	364	71	176	7th February 1888.
Puri	...	Puri	...	1,035	254	133	Ditto.
Sambalpur	...	Sambalpur	...	385	58	123	7th March 1895.
Ganjam	{	Berhampur	...	1,765	281	697	24th June 1921.
		Parlakimedi	...	699	96	345	Ditto.
		Total	...	2,464	377	1,042	
Total for the province.			5,715	978	1,892		



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ANNEXURE II.

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Provincial Statement showing the different kinds of lymph

District.		Primary vaccination.											
		Direct from the calf.					With lanoline or glycerine lymph.					Arm-to-arm	
		Total.	Successful.	Unsuccessful.	Unknown.	Percentage of successful cases.	Total.	Successful.	Unsuccessful.	Unknown.	Percentage of successful cases.	Total.	Successful.
1	2	3	4	5	6	7	8	9	10	11	12	13	
Cuttack	...	..	...	...	...	...	46,781	44,565	373	1,793	99·17	...	...
Balasore	...	...	...	...	...	...	22,891	22,104	31	756	99·86	...	...
Puri	...	...	...	...	...	...	37,687	28,523	1,800	7,364	94·06	..	...
Sambalpur	...	...	...	...	...	...	23,984	23,752	51	181	99·79	...	...
Angul	...	...	...	...	...	...	4,915	4,818	76	21	98·45	...	...
Khondmals	...	...	...	...	...	...	2,559	2,178	71	310	96·84	...	...
Ganjam	...	...	...	...	...	...	53,269	42,563	6,245	4,461	87·20	...	...
Koraput	...	...	..	...	...	...	34,129	28,645	2,864	2,620	90·91	...	...
Total	....	...	...	...	..	...	226,165	197,148	11,511	17,506	94·48	...	...



II.

used and their rates of success during the year 1936-37.

Re-vaccination.																	
vaccination.			Direct from the calf.					With lanoline or glycerine lymph.					Arm-to-arm vaccination.				
Unsuccessful.	Unknown.	Percentage of successful cases.	Total.	Successful.	Unsuccessful.	Unknown.	Percentage of successful cases.	Total.	Successful.	Unsuccessful.	Unknown.	Percentage of successful cases.	Total.	Successful.	Unsuccessful.	Unknown.	Percentage of successful cases.
14	15	16	17	18	19	20	21	22	23	24	25	26	27	28	29	30	31
...	...	..	...	...	...	...	...	34,637	4,041	3,084	27,562	57.12	...	..	...	...	...
...	..	...	...	...	...	...	...	25,997	17,438	3,292	5,267	84.12	...	...	...	...	...
...	...	...	...	...	...	...	...	16,727	5,617	3,421	7,689	62.15	...	...	...	...	...
...	...	...	...	...	...	...	...	128,174	71,027	7,174	49,973	90.83	...	...	...	...	...
...	...	...	...	...	...	...	...	640	129	47	464	73.30	...	...	...	...	...
...	...	...	...	...	...	...	...	9,042	4,941	1,318	2,783	78.94	...	...	...	...	...
...	...	...	...	...	...	...	...	127,447	47,529	61,047	18,871	43.77	...	...	...	...	...
...	...	...	...	...	...	...	...	34,177	15,253	13,263	5,661	53.49	...	...	...	...	...
...	...	...	...	...	...	...	...	376,841	165,975	92,596	118,270	64.19	...	...	...	...	...





GOVERNMENT OF ORISSA.  
HEALTH AND LOCAL SELF-GOVERNMENT DEPARTMENT.

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RESOLUTION.

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*Cuttack, the 14th March 1938.*

READ—

The Public Health Report for the year 1936 and the Vaccination Report for the year 1936-37.

1. *Vital statistics*.—The number of births during the year under report was 254,697. The highest birth rate of 41·7 was recorded in the district of Angul and the lowest rate of 23·3 in the Agency areas of the districts of Ganjam and Koraput. The total number of deaths during the year was 193,588. The number of deaths in the rural areas was greater than that in the urban areas. The highest death rate was 34·1 in the district of the Khondmals and the lowest was 15·9 in the Agency areas of the districts of Ganjam and Koraput. In the towns the highest death-rates were recorded in Puri and Kendrapara and the lowest in Cuttack and Jajpur. The excess of the birth-rate over the death-rate in the province was 8·8.

2. *Infant mortality*.—The rate of mortality among infants under one year was 205·4 for males and 191·9 for females. The total rate of infant mortality was 198·8 per mille of births registered in the province. Such high mortality is mainly attributable to the insanitary conditions in which the majority of the population live, to the lack of nutrition among mothers, and to the lack of ante-and pre-natal care. Malaria, the incidence of which is very high in the province, also contributed to a large extent. During the year under report the Bihar and Orissa Child Welfare and Maternity Society continued to function in North Orissa as the province had no central society of its own at the provincial headquarters. The society sanctioned a grant of Rs. 2,100 to the two centres at Cuttack and Balasore. The Maternity and Child Welfare centres at Balasore, Cuttack, Sambalpur and Berhampur continued to do useful work.

3. *Cholera*.—The death rate from cholera was 1·1 per mile. The districts of Cuttack, Balasore and Sambalpur and among the towns Sambalpur and Kendrapara recorded the highest incidence of death due to cholera. It was prevalent almost throughout the year in these districts and the number of deaths was about eight thousand. From April to August the intensity of the epidemic was high in the districts of Cuttack, Balasore and Sambalpur. In the district of Cuttack it was again severe in the months of November and December. The demand for doctors for epidemic was not very great as four district boards of the province maintain qualified Health Officers with suitable subordinate staff. The Public Health Department of Government had to detail only five epidemic doctors during the year when the epidemic was severe and beyond the control of the district board health staff. During the epidemic, anti-cholera vaccine was also supplied by Government free of cost to the local bodies of the province. Anti-cholera inoculations were carried as a preventive measure.

4. *Bacteriophage*.—Cholera phage manufactured at the Bihar Bacteriological Laboratory, Patna, was purchased and used extensively in the districts during the period of epidemic. During the Rathjatra festival at Puri, cholera phage was mixed with drinking water which gave very satisfactory results.



5. *Small-pox*.—The total number of deaths from small-pox during the year was about four thousand and the rate of mortality for the year was 0.5. The low death-rate during the year is attributable to the immunity conferred by the extensive vaccinations and revaccinations carried out during the previous years. The rural areas suffered more than the urban areas. The highest death-rate was registered in the district of Cuttack and in the Khondmals and the lowest death-rate in the district of Puri and in the Ganjam plains. Among the towns Balasore and Sambalpur recorded the highest death-rate. During the year under report vaccine lymph was purchased by Government from the Vaccine Depot at Namkum, Ranchi, and was supplied free of cost throughout the province. Primary vaccination is compulsory in all the towns of North Orissa and in the rural areas of the Puri district. Both vaccination and revaccinations are compulsory in the plains areas of the Ganjam district and in the municipal areas of Berhampur and Parlakimedi. Control of vaccination has been transferred to local bodies that have health organizations and their Health Officers have been appointed Superintendents of Vaccination. In the districts where the local bodies have no qualified Health Officers, Civil Surgeons continue to be the Superintendents of Vaccination. The Director of Health and Prisons Services, Orissa, is of opinion that unless vaccination and revaccination are made compulsory, small-pox will continue as an epidemic. The proposal to make vaccination compulsory throughout the province is under the consideration of Government.

6. *Plague*.—No case of plague was reported in the province during the year under review. Particular care was, however, taken to prevent infection through the port at Gopalpur.

7. *Leprosy*.—Leprosy continues to be a problem of the first magnitude in the province and its incidence is very high. During the year under report fifty four outdoor leprosy clinics were working and the number of patients who attended these clinics was about forty-two thousand. In addition to these clinics there is one Leper Asylum at Cuttack and one Leper Colony at Puri, having accommodation for indoor patients. In South Orissa there is no leper asylum or colony for treatment of the indoor patients. One such institution in each of the districts of Sambalpur and Ganjam is a necessity. It is hoped that the problem will be solved to a great extent with the appointment of a Provincial Leprosy Relief Officer and with the formation of District Leprosy Relief Committees. Steps are being taken to appoint a Leprosy Relief Officer as soon as possible.

8. *School medical examination*.—In North Orissa the number of students examined was about five thousand of whom about three thousand were found to be defective or diseased. At the end of the examination the parents or the guardians were informed of the particular defects the boys were suffering from and proper advice was given for their treatment. The school medical Examination was not done in South Orissa during the year as the system was not in vogue there.

Arrangements have, however, been made for such examination in future. Medical examination of girl students was not done throughout the province for want of a lady School Medical Officer. The question of appointment of one such officer is under the consideration of Government.

9. *Public Health Department (Engineering Branch)*.—A Summary of the activities of this Department relating to sanitary works in the areas under the jurisdiction of local bodies during the year is appended to the report.

10. The office of the Director of Health and Prisons Services was held by Captain P. L. O'Neil, I.M.S. from the 1st to the 26th April, 1936, while Lt.-Col. Verghese, M.D., Ch.B., D.P.H., D.T.M., D.T.H., I.M.S., remained in charge of the Department for the remaining period of the year. Government desire to thank both these officers for a year's record of excellent work.

By order of the Governor,  
M. K. VELLODI,

Secretary to Government.





